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Original Articles

ANKYLOSIS.

ARTHROPLASTY—CLINICAL AND EXPERIMENTAL.*

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The subject of ankylosis and its treatment presents many problems for consideration. In order immediately to emphasize the salient points of the subject, we will some questions: What are joints? What is the embryology of joint formation? *What is the pathologic histology of acquired arthroses or false joints?* What is the pathology of hygromata (acquired endothelial lined sacs)? Can they be produced artifically? What is ankylosis? What are the pathologic and anatomic changes included in the term? What tissues are involved? *From a practical standpoint, into what classes* may it be divided? When ankylosis has formed, what are the limitations of surgery for its relief? Can we re-establish a movable, functionating joint with synovial lining? Can we restore motion and to what degree? In what class of cases can the best results be secured? Can we for the future promise better than the flexible, fibrous unions that we have secured in the past?

These were the questions that most forcibly presented themselves when I began the investigation of this subject in July, 1901. Subsequent experience has shown that, from a clinical standpoint, the majority of these have been answered favorably. Experimental work on joints in dogs is unsatisfactory on account of the difficulty in controlling infection and motion. A preliminary report of this work with demonstration of one of the cases was made to the Chicago Surgical Society at Mercy Hospital, October, 1902.

EMBRYOLOGY OF JOINTS.

From a practical standpoint the classification of joints is as follows: The synarthrosis, the amphiarthrosis and the diarthrosis. The subdivisions of the latter, the ginglymus (elbow, ankle, wrist, etc.), the ginglymo-arthrodial (knee, temporo-mandibular), and the enarthrodial (shoulder and hip) are the only joints which concern us in this class of surgical work. The types of motion which are present in these joints are the hinge and ball and socket, which are the sliding and rotary motions of the forearm, shoulder and hip; the two latter are the most favorable for the restoration of motion after ankylosis, as the degree of sliding motion is extremely limited compared with that of the elbow and knee. The histology of joint formation is best illustrated by the works of Hertwig, Meyer and Gegenbaur and may be summed up as follows:

Diarthrosis is a differentiation of primitive synarthrosis of which it is a transformation. This mode of union exists almost exclusively between parts of the skeleton and is preceded by preformed cartilage during their development. When a joint is formed between two bones which are not developed from primordial cartilage, it is formed secondarily from cartilaginous tissue between the rudiments of these bones.

The origin of joints seems to be in connection with the differentiations and perfection of the cartilaginous parts of the skeleton. These are separated for a long time by interposed indifferent tissue (Fig. 1, A). At the same *time that the cartilaginous elements of the skeleton increase, the interposed connective tissue which separated* them at first, is itself transformed into cartilage and disappears. Figure 1, B, shows the beginning of this cartilage formation at the expense of the interposed connective tissue.

At the end, the two terminal cartilaginous surfaces of the two skeletal organs are found in immediate contact; they each have a predetermined form, characteristic for each joint. The two contiguous extremities of the skeletal parts are found separated by a mass of cartilaginous tissue, formed at the expense of the primary intermediate tissue (Fig. 2).

A slit, at first very delicate, soon appears in this intermediate cartilage, and divides it into two layers, one and the other applied against the terminal surfaces of the cartilaginous skeletal parts. These layers constitute the articular cartilages (Fig. 3, A). At the same time, the slit has become more extensive—the joint cavity; it separates the articular surfaces of the two bones. Externally, the joint cavity is limited by connective tissue extending from one skeletal piece to the other. This connective tissue is continuous beyond the joint surfaces with the periosteum (perichondrium) of the two developing bones. It is this connective tissue surrounding the joint cavity which gives rise to the joint capsule (Fig. 3, B). The external layers of this tissue are differentiated into a fibrous membrane, generally tough, called the capsular ligament, and an inner softer layer turned toward the joint, which it bounds; it is richly vascular and constitutes the synovial membrane.

The capsular ligament is not equally developed over its whole extent. It remains thin in certain places, and thickens on the contrary in others, so as to form bundles of more rigid fibers. These bundles develop in a given direction, acquire a variable freedom, and may even become completely separated from the capsular ligament. Thus are formed the accessory or auxiliary ligaments.

The intermediate interposed tissue, which existed in the rudimentary joint, is not always entirely used up in the increase of the articular ends of the bones. When the joint surfaces do not correspond closely to each other, remnants of this tissue persist at the periphery of the joint cavity united to the synovial membrane of the capsule. These remnants project into the joint cavity and constitute prolongations or folds of the synovial membrane.

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* Read before the American Surgical Association, St. Louis, 1904.

In other cases, the differentiation of the contiguous articular ends does not go so far. The two articular surfaces do not touch over their whole extent, but only a part of it; in this case a larger part of the intermediate tissue persists in the joint capsule. The joint surfaces are thus more or less discordant. This intermediate tissue is then transformed into fibro-cartilage and constitutes an organ which on cross section is semilunar in shape (Fig. 3, A).

In some cases, a continuous joint cavity is not formed, the embryonic intermediate tissue being less utilized in the formation of the articular cartilages. Before the transformation of the articular surfaces in contact can take place, a slit appears between the joint surfaces and the intermediate tissue, which develops into a joint cavity. It follows, then, that each of the articular ends will be lodged in a special joint cavity, separated from the one containing the other bone by a layer of intermediate tissue. This latter is finally transformed into an interarticular cartilage, separating the two articular cavities of the same joint, as in the temporomaxillary articulation (Fig. 4). These interarticular cartilages may be continuous or discontinuous. When they are discontinuous, as is the case with the semilunar cartilages, the two special joint cavities are incompletely separated from each other. When they are continuous, on the contrary, the joint cavities are completely separated by them. In both cases, they are the remains of the primitively continuous intermediate tissue.

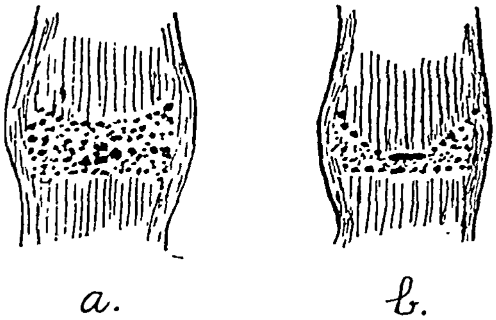

Fig. 1.—(*a*) Indifferent tissue interposed between ends of developing bones. (*b*) Beginning cartilage formation in interposed tissue (Gegenbaur).

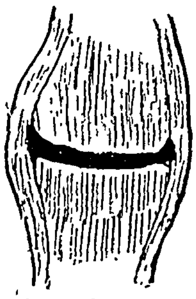

Fig. 2.—Cartilaginous tissue between ends of developing bones (Gegenbaur).

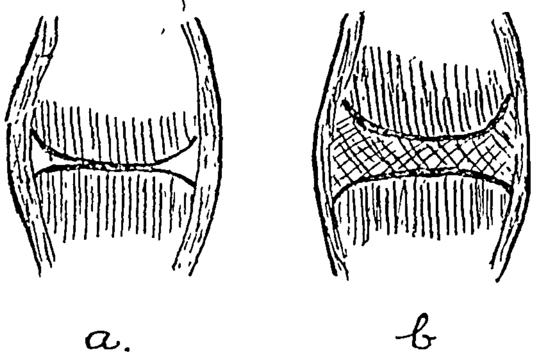

Fig. 3.—(*a*) Joint cavity and articular cartilages formed by division of intermediate cartilage. (*b*) The external connective tissue, which is continuous with the intermediate tissue, forms the joint capsule (Gegenbaur).

The first stages of joint development occur during fetal life, when no muscular action is present. The characteristic feature and disposition of the joint surfaces are already formed before the joint can functionate. The final transformation, i. e., the extension of the joint cavity, etc., only occurs after the joint is put to use. It is determined by the skeletal movements and by muscular action.[1]

EMBRYOLOGY OF JOINTS.

The wrist and ankle have a purely endochondral ossification,[2] the cells of connective tissue grow into the cartilage from the perichondrium, dissolve the matrix of cartilage and unite with one another in the center, and there arises a network of medullary (marrow) cavities, in the vicinity of which there is a deposit of salts of lime (a provisional calcification). The medullary spaces extend farther and farther by destruction of the cartilaginous substance; then there are formed by the superficially located medullary cells, bone lamellæ, which gradually increase in thickness. The osseous nucleus thus formed slowly increases in size. until finally the cartilage is almost entirely replaced, only a thin layer of it remaining at the surfaces as a covering for the bone.

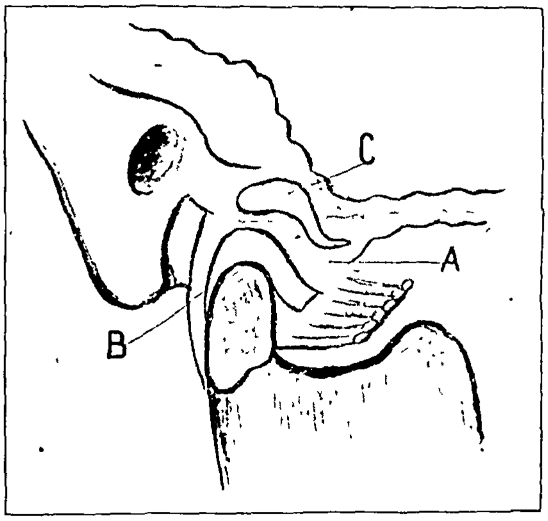

Fig. 4.—This shows the interarticular cartilage, (A) separating the joint into two distinct cavities, B and C temperomaxillary articulation.

The question whether the extremities of bones, the articular surfaces, are subject as far as their form is concerned to mechanical laws only, has been much discussed. According to Bernays,[3] the early and typical form of joints appears to be a matter of heredity. The muscles also have a decided influence on the later forms of articular surfaces.

According to His, the development of the body of vertebrates in the ovum is determined and controlled by mechanical laws, while Haeckel considers heredity as a determinant factor.

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[1] Gegenbaur: Zur Morphologie der Gliedmassen der Wirbelthiere, Morphol., vol. ii, 1876.

[2] Hertwig-Mark: Text-Book of Embryology.

[3] Bernays, A.: Die Entwickelungsgeschichte des Kniegelenks des Menschen, und Bemerkungen über Gelenke im Allgemeinen.

L. Fick[4] states that at the end of the second month, the joints show a tendency to shape, still "the greatest irregularity exists in the form of articular surfaces." There are not two joints alike at that period, among the articular surfaces of phalanges.

In regard to the question, what determines the form of articular surfaces, Fick has shown in his monograph that muscular activity is responsible for the peculiar form of the different articular surfaces. By experimenting on young dogs, he has noticed that the section of muscles is followed by a change in the form of the corresponding articular surfaces and also of the interarticular space. By experimental immobilization of the joints of growing dogs, the space and form of articular surfaces was changed; the interarticular line became irregular.

As to the question why it is that one extremity of bone becomes a prominent surface, while the next extremity of bone becomes an articular cavity, several explanations are given.

Fick says that beside the muscular activity, on account of more active circulation, the multiplication of cells is more marked in one end than in the other, so that it penetrates the latter and forces it to excavate.

Henke and Reyher[5] explain this by the fact, that the muscles force the bone, on which the insertion is nearer to the articular surface, against the other bone, on which the insertion is further from the interarticular line, so that it determines the formation of a cavity by means of pressure in the former.

The essential phenomena, says E. Retorer,[6] concerning the formation of the joint cavity take place when the cartilaginous segments are nearly in contact and before there is any articular slit. We find that at this stage the superficial layers of the cartilaginous segments are not yet free; the flattened and crowded cells limiting these segments are succeeded by a much clearer connective tissue. This is made up of fusiform and stellate cells, whose numerous prolongations enclose meshes filled with Wharton's jelly. In other words, the embryonic connective tissue which is not transformed into cartilage has developed into mucous connective tissue, the interval between the cartilaginous segments where the future joint will be. Little by little, these meshes become larger and larger, the prolongations of the cells more and more thinned; the cell body less and less clearly outlined, staining with difficulty. In short, the cells with their prolongations atrophy and with the nuclei disappear, and at the same time, the joint surfaces become free. By undergoing mucoid transformation in the interval between the cartilages, the embryonic connective tissue gives rise to the first synovial fluid. On the inner side of the joint capsule, the connective tissue persists as closely packed elements and gives origin to the synovial membrane which is lined with many tiers of flat cells.

Hence there are the following stages in the formation of a joint cavity:

1. Existence of an embryonic connective tissue with closely packed cells.
2. The production of fusiform and stellate cells whose prolongations anastomose.
3. Elaboration of mucoid substance in their meshes.
4. Atrophy of the cellular elements and their prolongations.

The joint cavity succeeds the evolution of this embryonal connective tissue, which, in place of producing cartilage or bundles of areolar tissue, elaborates the mucoid substance giving rise to the first synovial fluid.

Every joint begins by a stage where the segments present are bound together by a compact tissue, which establishes their continuity. While most joints remain thus, we see in movable joints this connective tissue persisting only at the capsules, ligaments, etc., which becomes fibrous, fibro-cartilaginous, or even osseous tissue.

At the places were the skeletal segments come in contact, however, their continuity is changed into contiguity, because the thin layer of intervening connective tissue has disappeared by mucoid degeneration. In other words every diarthrosis passes through a transition state which may be compared with an amphiarthrosis..

HYGROMA-BURSA.

While in the embryology of joint formation, always primarily formed without a cavity, a splitting or liquefaction of cartilaginous or connective tissue between the cartilages takes place, the superficial bursæ are made by the same splitting between fat capsules (subfascial) on aponeurotic mesoblastic tissue.[7] Fat tissue rapidly or easily changes to connective tissue. Bursa formation is due to the absorption of fat from fatty tissue and the coalescence of the small fat capsules with an increase or hyperplasia of the connective tissue and its degeneration with the development of collagen.

It is the solution of liquefaction of the collagen in the center that forms (fibrinoid—a degeneration product) the fluid in the cavity of the bursa. The fluid is a liquefied collagen, not a secretion from the surface of the cavity (serous) as Virchow taught. The "rice bodies" are dead proliferations of partially developed tissue or fibrin of the small villi or *"zotten."*

Hygroma is, then, the result of a degenerative or absorptive process in fatty tissue with hyperplasia of the connective tissue element, the segmentation of the collagen into solution, "fibrinoid," a liquefaction of hypertrophied connective tissue. The cells lining the newly developed cavity appear as flattened endothelial cells; these are really transformed connective tissue cells.

The hygroma has no vessels and, therefore, can not become inflamed. It may be the center of phlegmon and necrosis, but it is not itself a part of the process. (It can not be cured by drainage unless necrosis takes place, but it can be cured by extirpation.) Hygromata and ganglia are the combined products of liquefaction of hypertrophied connective tissue.

In the artificial development of joints, it is important to utilize these facts. The aponeurosis that is to be used in the construction of artificial joints should have in it a considerable quantity of fatty tissue, which when subjected to pressure forms the hygroma. This is not infrequently seen in the nonunion of fractures in the shafts of the long bones, forming what is known as the "false joint" or "interosseous sac." It is the recognition of this pathologic condition that has led to its utilization in arthroplasty. That this sac with lining resembling *endothelium* is formed, was demonstrated beyond question in animal experiments reported later.

EXPERIMENTS.

1. *Large white dog.* Operated on Dec. 15, 1903. Operation: (*a*) U-shaped incision over right hip.

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[4] Fick, L.: Ursachen der Knochenformen, 1857.

[5] Henke und Reyher: Sitzung. der k. k. Wiener Akademie, 1875, vol. lxx.

[6] C. R. Soc. de Biologie, 1894, p. 862.

[7] Langemak: Arch. klin. Chir., vol. lxx, No. 4, p. 946.

tally; when the patient survives, the conditions remaining are the usual sequelæ of panarthritis, with bony ankylosis. Following gonorrhea, there are three types of arthritis—the chronic, painful and dry—extending over months and even years, and followed by a plastic, adhesive synovitis; the acute and subacute serous synovitis, which runs rather a rapid course and terminates without ankylosis and the mixed infection variety, which terminates in suppuration, synovial necrosis, fibrous or bony ankylosis without involving the periarticular tissues.

Traumatic suppurative arthritis may be divided into the nonpenetrating and the penetrating. Suppuration of the joint following a trauma may occur without an abrasion or laceration. Usually, however, it is secondary to a traumatic osteomyelitis which subsequently affects the joint; it occurs much more frequently in the young and growing. The penetration of the joint from without inward may be considered as puncture and stab penetrations and bullet wounds. Since antiseptic surgery, with the immediate sealing of penetrating stab and puncture wounds, has become the practice, and the probe condemned, suppuration rarely follows these types of punctures. The same may be said of bullet wounds, but, in civil practice, bullet wounds are more frequently followed by infection than in the recent military cases. When evidence of infection is manifest, free drainage, without the use of antiseptics or manipulation, is all that is indicated and gives fairly good results. It must be timely and must relieve the pockets of the joint and its periphery. When perforations occur from within outward, as in compound fractures and luxations, when the joint is opened by the protrusion of bone through the soft parts, the danger of infection is very much less, or practically *nil*, if care be taken immediately to seal the wound. These cases do not require drainage. Hermetical sealing of this class of injuries has given the most brilliant results—the most positive proof of the value of asepsis. In Billroth's "Surgery and Surgical Pathology" (translation of 1876) amputation was advised for all compound fractures involving joints. At the present time, however, when infection takes place, these injuries are frequently followed by ankylosis and many times by deformity. The latter is avoidable if care be taken to keep the limb in proper position, either by extension or by mechanical support.

Osteitis of the tuberculous type is probably the most common cause of ankylosis. While pathologically there is primary tuberculous synovitis, practically all cases of tuberculosis in joints are secondary to a primary focus in the bone, usually occurring near the junction of the diaphysis and epiphysis. This tuberculous granuloma enlarges, softens the bony structures, frees the cartilage and finally ruptures into the joint, there producing a tuberculous arthritis. If a mixed infection exists, the capsule ruptures, the pus discharges and the destruction of the joint will be rapid. If it be simply tuberculous infection, the process of destruction of the cartilage and synovial membrane is slow, but nevertheless effectual, and finally results in a partial or complete bony ankylosis or in a fibrous organic union of the two ends of the bone.

The frequency of the osseous origin of tuberculous arthritis may be judged from my experience with the knee joint. In 128 cases of tuberculosis of the knee, in all but two it could be clearly demonstrated that the origin of the disease was in the bone. In one of the two it was doubtful, and in the other it appeared to be a clear case of synovial tuberculosis. In a large percentage of the cases in which I formerly did an excision I feel now that the bony destruction was of such a mild degree that an interposition arthroplasty might have been performed and the motion in the joint restored. From observation I consider that tuberculous synovitis of the hip is more frequent than tuberculous synovitis of the knee, but the difficulty of carefully examining the head of the femur and acetabulum may account for the apparent disparity. In planning to operate on these cases for the restoration of motion, the question of luxation or subluxation must be given grave consideration, as restoration of position is a very difficult undertaking.

Osteomyelitis of the epiphyseal or "end" type, of the British authors, not infrequently secondarily infects the joint and produces extensive destruction of cartilage, synovial membrane and bone ends, even to a panarthritis; to be followed later by an osseous ankylosis. It differs from tuberculosis in the fact that the tuberculous process does not affect the joint or bone end to an incapacitating degree until five to seven weeks after the trauma or exposure, while the osteomyelitic processes produce profound manifestations, local and constitutional, in the way of pain, swelling, arthritic effusion, etc., with chills, high temperature, delirium and severe septic intoxication within from 48 to 96 hours after the trauma or exposure. The clinical history of the onset of these two diseases is so clean cut that they can not be confused if carefully analyzed. The periarticular involvements following acute septic osteomyelitis may lessen the chances for free motion after operative procedure.

Periarthritis, due to phlegmonous inflammations in the neighborhood of joints, not infrequently inhibits or entirely obliterates motion by the fixation of the periarticular tissues (ligaments, tendons, etc.); if fibrous synovitis does not result, however, and if the joint is not penetrated by the infection, a fair degree of motion may be secured. If the joint has been penetrated by the infection, then all the tissues of the joint may be involved and a panarthritis may result.

In panarthritis, the bone, cartilage, synovial membrane, capsule and periarticular tissues are infected, no matter in which tissue the primary focus originated. This type of inflammation frequently results in luxation and adhesion of the tendons, and even ulceration and necrosis of the capsule, ligaments, bone and muscular tissue around the joint, so that a complete luxation of the bone results. (I recently saw a case of this type, with infection of the hip joint.) The destruction of the tissues here may be so complete that no effort at the restoration of motion should be attempted.

Primary ossifying arthritis is a rare type of joint disease, not associated with pronounced inflammatory symptoms, insidious in its onset, slow in its advancement, but resulting inevitably in osseous ankylosis. Fortunately, it usually occurs in patients beyond middle age, and attempts at restoration of the joint should not be made.

Static adhesive arthritis is a sequence of prolonged fixation. This fixation may be due to diseases of the bones which make up the joint or it may be due to periarticular inflammations or trauma. There is rarely ever an osseous ankylosis as a sequence of this trouble. The capsule, however, becomes firmly organized to the cartilage, and the endothelial layer of the synovial membrane is destroyed. In other words, there is a fibrous synovial fixation. In such cases, before undertaking operative procedures, an accurate estimate must be made of the part played by the periarticular tissues, rather than the adhesive synovitis. In burns, extensive phlegmons and severe contusions the cicatrices around and in the neighborhood of the joints produce ankylosis, which may or may not be associated with adhesive fibrinous synovitis. If these cases are operated on soon after the process of repair of the soft parts is complete, the joint will not have to be opened, the periarticular cicatrices demanding our entire attention. The most pronounced example of this type is the mandibular fixation following ulcerative stomatitis or noma.

TREATMENT.

Treatment must be directed against any one of the following types of anatomic pathologic conditions:

- A—Extra capsular disease
  - 1. Tendon elongation—(tendoplasty).
  - 2. Tendo vaginitis (exsection of sheath).
  - 3. Cicatrices—removal.
- B—Capsular
  - 1. Adhesive synovitis—exsection of capsule.
  - 2. Replacement by aponeurosis or muscle.
- C—Osseous
  - 1. Disconnect bones.
  - 2. Remove neighboring bony processes or prominences.
  - 3. Liberate soft parts.
  - 4. Prevent subsequent bony contact.
  - 5. Interpose tissue to form hygroma or fibrous surface.
- D—Joints suitable for operation
  - 1. Mandibular.
  - 2. Hip.
  - 3. Shoulder.
  - 4. Elbow.
  - 5. Knee.
- E—Technic
  - 1. Flap formation—skin flap with fascia or muscular.
  - 2. Exposure of ankylosed area.
  - 3. Osseous separation.
  - 4. Transplantation and fixation of interposition flap.
  - 5. Replacement of bone.
  - 6. Fixation of parts.
  - 7. Drainage.
- F—Subsequent treatment
  - 1. Passive motion.
  - 2. Active motion.
  - 3. Forcible extension.
- G—Prognosis
  - 1. Mandible.
  - 2. Hip.
  - 3. Shoulder.
  - 6. Elbow.
  - 5. Knee

The treatment of ankylosis in the past may be classified as the forcible separation of the adherent surfaces, and endeavor to maintain motion after the adhesions had once been freed (*brisement*). In a very small percentage of the cases, namely, those of synovial adhesion without organic union, the result was gratifying. In the enormous percentage of cases in which the lesions were due to necrosis of the synovial membrane or to fibrous or osseous union of the articular surfaces, ankylosis recurred after *redressement*, and the limb was in as bad, if not in worse, condition than before.

Schuh, in 1853, mobilized the patella with the chisel by cutting the synechia, but interposed nothing, and the ankylosis recurred. Cramer[8] says that operations in which the adhesions were separated by forcible distension (Ollier), by the mallet (Hueber), or by the chisel (Schuh) rarely have been successful, and that the Brachi method of establishing movement of the patella by manipulation is equally unsatisfactory.

Helferich, in 1899, proposed to free the patella with a chisel and to interpose part of the vastus internus between the patella and femur to prevent adhesion. He did not perform the operation.

Cramer[9] saw 10 cases of ankylosis of the patella, in 7 of which he operated by interposition of the vastus internus; 6 operations were successful. This does not imply ankylosis of the knee joint, but of the patella alone.

Verneuil[10] and Helferich preceded him in this idea, both in suggestion and performance, by the interposition of portions of the muscle and fascia in temporomaxillary ankylosis.

Chlumsky[11] states the following: "The treatment of complicated contractures and ankyloses of the joints as far as *restitutio ad integrum* is concerned gives very unsatisfactory results. I have collected 14 cases of ankylosis, other than tuberculosis of the knee joint, with contraction, which occurred in the last 10 years in the Breslau Surgical Clinic and were there treated, and in not a single case was there improvement in the mobility of the joint." He found also no better results recorded in the literature on the joints, and for that reason undertook experiments in the endeavor to clear up the question. He then attempted, through forcible extension and flexion repeatedly done under anesthesia, to secure mobility of the joint. After each trauma there were additional deposits of osseous and fibrous tissue, and the cases were uniformly worse after than before the operation. He reasoned that the interposition of muscle or fascia, such as takes place in pseudoarthroses after fracture, should give good results. Good results along this line were obtained by Mikulicz, Helferich, Lenz and Riegner, and, with this knowledge, Chlumsky concludes that in large joints this procedure is not possible, either through failure of preservation of the interposed parts or on account of technical difficulties.

Not satisfied to abandon the field, he decided to resort to the interposition of foreign bodies and conducted a large number of experiments. The materials used were plates of celluloid, silver, zinc and rubber, cambric, and layers of collodion, and, while he succeeded in retaining mobility with these interposed materials in some cases, a fair preservation of the articulation beyond four and one-half months was not obtained. The ankylosis ultimately occurred and the foreign body became extruded from the joint. He, therefore, concluded to substitute, for the unabsorbable material, absorbable material, such as decalcified bone, ivory and magnesium. In these cases, at the end of from three to twelve weeks, he found various degrees of absorption and in some a moderate attempt at the formation of a joint, but with very unsatisfactory results on the whole.

At this period, Oct. 5, 1901, I performed my first operation, Mr. D. (full particulars given under the heading of "report of cases").

Hubscher[12] used magnesium foil, 5 millimeters in thickness, in ankylosis of the patella. Speaking of the different methods and experiments, he mentions Bruns, who has successfully transplanted the flexor tendons after five years of immobilization by adhesions. He failed to secure freedom of the patella.

McIlhenny[13] operated for temporomaxillary ankylosis by osteoclasis and the formation of a new joint. The details of the operation were as follows:

An Esmarch incision was made on the right side, exposing the jaw bone from the sigmoid notch to a point a little anterior to the angle. The masseter was retracted and a wedge of bone, one-half inch in diameter, was removed from the neck of the condyle just above more, the limbs must be hyperextended and abducted, as the adductor and flexor muscles are usually the ones that are contracted, and the extensors and abductors, as a rule, are the weaker set of muscles. This weaker set, therefore, should be given the advantage in position of the limb immediately after operation. Tenotomy, myotomy, tendoplasty or myoplasty may be performed at the time of the operation. Great care must be taken, however, in operating on the quadriceps or on the triceps tendons that the line of union is not permitted to adhere to the bone, as this would permanently incapacitate the muscle and prevent contraction. This can be readily avoided by interposing a flap of fatty tissue, muscle or aponeurosis from the neighborhood.

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[8] Paper read before the 30th Congress of the Deutsche Gesellschaft für Chir., Berlin, April 13, 1901.

[9] Arch. klin. Chir., 1901, vol. lxiv, p. 696.

[10] Verneuil, A.: Archives de Medecine, 1860, p. 284.

[11] Chlumsky: Centralb. f. Chir., Sept. 15, 1900. Wien. klin. Woch., 1902.

[12] Hubscher: Corresp.-blatt f. Schweiz. Aerzte, Dec. 15, 1901, vol. xxxi, p. 785.

[13] McIlhenny: New Orleans Med. Jour., April, 1901.

In general the elements which have contributed most to the failures have been:

1. The insufficient or defective exsection of the synovial membrane, capsule and ligaments.
2. Insufficient interposition of fat and aponeurosis, or of fat and muscle, between the separated bony surfaces.
3. Infection.
4. Sensitiveness to pain on motion after operation.

Where osseous union has existed, it is important to disconnect the bones in as nearly their normal line of union as possible. This can be done with the narrow chisel better than with the saw. In the shoulder and hip the chisel can be used to separate the bones so as to outline the line of fracture as deeply as is necessary to secure nearly the normal conformation both of the head and cavity. All bony prominences that may impinge against other bones in extreme degrees of motion should be removed; for example, the coronoid process and the tip of the olecranon process. The soft parts should be liberated most thoroughly. It appears a repetition, but it can not be too forcibly impressed on the operator that this is essential to a good result, and muscular aponeurosis with fat makes the best interposed tissue. If the aponeurosis can not be found, then the muscle and some fatty tissue should be substituted, as the muscle, when subjected to pressure, gradually flattens out into an aponeurosis in many joints, but it does not well withstand the early pressure which is necessary to a good result.

The development of a hygroma from pressure of fatty tissue should be the uniform result, as was shown in experiment No. 2 and as occurred so perfectly in my first hip case. When the muscular contraction is great it may be overcome by Buck's extension. So much for the general consideration of the operative technic. Now to the individual joints.

The temporomaxillary ankylosis was the first to direct the surgeon's attention to the necessity of this type of surgical intervention. So far the results have been mostly of the fibrous union type, but by using the temporal fascia and fat, which can readily be interposed on the cadaver, it should be possible to produce movable and perfect joints on the living subject. In cases in which there is cicatricial contraction of the cheek muscles and fascia, following trauma, the head of the bone should be excised. If much cicatricial tissue exists on the mucous side, a flap of skin from the neck, with its pedicle below the ear, can be passed into the mouth and the skin kept toward the teeth. The skin acts as a good substitute for the mucosa and excellent motion can be secured, as in a case I operated on in this manner in 1898. The result is good at the present time.

(To be continued.)

THE TREATMENT OF BONE CAVITIES.

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Every surgeon knows how necessary it is to secure apposition of the soft tissues in order that perfect union may follow. He also knows that by the judicious use of buried absorbable sutures and pressure he can avoid the dangers of dead space. There are some wounds where soft and bony tissues are both involved; for example, an excision of the elbow, in which it is impossible to avoid dead space, because it is necessary to keep the cut bone ends separated to prevent bony union, and in which it is not practical to fill the gap with the soft tissues. Under perfect conditions, Schede's method of allowing the space to fill with blood clot will yield favorable results, but, unfortunately, perfect conditions seldom obtain. This blood clot is the very thing we are trying to avoid when we try to obliterate dead space, because it is such a good culture medium and is so liable to end in suppuration. Although the intelligent use of the blood clot is of very great value, it is open to so many objections that we are constantly trying to avoid it by obliterating dead space. That we should ever deliberately use it is a surgical paradox.

The surgeon experiences even greater difficulty in overcoming bony defects because nature seems to be less helpful in dealing with bony tissues. Schede's method has also been employed in filling cavities in bone, but it is open to the same objections here as in the soft parts—with one exception—and when it does succeed shrinks so that the end results are not eminently satisfactory. The exception is that in bony tissues the size of the blood clot can be better controlled.

Newber's method of turning the periosteum and integumentary flap into the bone cavity and fastening it there is only applicable to very superficial bones like the tibia, and leaves very unsightly scars.

The modern surgical belief is that a local tuberculosis should be treated by removing it just as if it were a malignant growth, because untreated it has a natural tendency to spread, and because the removal is so successful. Having removed a focus of this kind from bone, a very common method of treatment is to pack the wound with iodoform gauze and to keep repacking it until it is healed from the bottom. This is a tedious and at first a painful process, and not infrequently there is a recurrence of the disease in the sinus in spite of every precaution. A bone cavity made for the removal of a tuberculous focus where there is no mixed infection is an ideal one to fill with some artificial material which will permit the complete closure of the wound.

The modern operation of necrotomy for the removal of a sequestrum following osteomyelitis is a very safe and satisfactory one. The dangers from sepsis are removed by our present methods of wound treatment, and the danger from hemorrhage which was at one time a very grave one, is now completely overcome by the use of the Esmarch's bandage. Another very great advantage of this bandage is that when it is applied we can use the strongest disinfectants without fear of poisoning from absorption. It is very important that it be always used in operations on chronically inflamed bones, because without it the hemorrhage is always troublesome and ofttimes dangerous. Having removed the dangers from this operation, the only drawback is the very slow healing of the open wound. When we can fill this cavity with some material that will admit of the immediate closure of the wound, thus doing away with the protracted convalescence, we shall have attained surgical perfection.

Chronic bone abscess without necrosis is also a very favorable condition for the use of an artificial bone plug, because the cavity is easily sterilized and the immediate closure of the wound saves the patient weeks, and sometimes months, of time and suffering.

Dentists have for a long time excited our admiration by the skill with which they fill cavities in teeth with artificial filling, but they admit that they have not yet found a perfect filling material. Surgeons have faithfully applied dentists' methods and materials to the filling of bone cavities, but have failed because the materials act as foreign bodies on the soft parts and cause trouble. Plaster, cement and copper amalgam have been tried and found unsatisfactory. The last notable effort made in this direction was by Senn, who advocated the use of decalcified bone chips. These chips were dusted with iodoform, packed into the cavity and the wound closed. The interspace between the chips necessarily became filled with blood clot. While meeting with a measure of success, the failures were so numerous as to prevent this material from coming into general use.

In January, 1903, von Mosetig reported a large number of successful results from the use of a new bone plug. In my original title I spoke of this material as Moorhof's bone plug, because my knowledge of it came from his extensive and successful use of it in his clinic at Vienna.

This material consists of sixty parts iodoform, forty parts spermaceti and forty parts of oleum sesami. These ingredients are slowly heated to 100 C., and when allowed to cool form a soft solid which remains solid at the temperature of the body. For use it is heated to 50 C., being constantly stirred to keep the iodoform evenly distributed. At this temperature it can be poured into the cavity, where it immediately solidifies. This material does not act as a foreign body, nor does it act as a culture medium. It possesses the inhibitory and medicinal properties of iodoform without causing iodoform intoxication. Its physical properties are such that it is gradually absorbed and replaced by granulations and finally by new bone. Moorhof shows many skiagraphs illustrating this process.

In using this material the most important part of the technic is the preparation of the cavity. It must be dry and sterile. When the cavity is largely surrounded by soft parts it is impossible to prevent some oozing into it, and it is advisable to provide for some temporary drainage, preferably by a few strands of catgut which will absorb and thus avoid the necessity for an early change of dressings. In tubercular cavities where there is no mixed infection, and in chronic bone abscess where the cavity is practically sterile, success is almost certain, but in tubercular cavities with mixed infection and in those made for necrotomy it requires the utmost care to secure asepsis. The soft parts and the periosteum should be retracted, and the bony covering sufficiently removed to admit of free access to the cavity. All diseased or necrotic tissue must be removed and the cavity dried and disinfected. The drying can usually be done by means of gauze. An adrenalin solution has been used where oozing is persistent. One to 500 bichlorid or a 12 per cent. solution of chlorid of zinc have been used for disinfecting the cavity, but I prefer the 95 per cent. carbolic acid followed by alcohol. With the Esmarch's bandage applied and the cavity thoroughly dried the cavity can be filled with the acid, which may be left for several minutes with impunity. Moorhof uses an electric hot-air blast in his clinic, which both dries and disinfects the cavity. A Paquelin can be used, but is not so convenient.

The cavity having been prepared, it is poured full of the melted material. The periosteum is closed with catgut and the integument with fine silk, after which a copious surgical dressing is applied and the part is put at rest. This treatment can not be used in acute osteomyelitis, because the cavity can not be sterilized.

My experience with this material, although limited, is sufficient to satisfy me that better results can be obtained in these cases through its use than by any older method.

As an illustration, I will briefly report 4 recent cases:

Case 1.—W. B., of Minneapolis, a boy aged 6 years, with a badly united fracture of the inner condyle of the humerus. Both extension and flexion are greatly limited by bony impact. Aug. 16, 1904, at the Northwestern Hospital, Minneapolis, arthrotomy was performed. The condyle was found rotated on its transverse axis and united in such a manner as to make improvement impossible without an operation. It was impossible to separate the fragment and restore it to its normal position without endangering its circulation, so the projecting points were shaved off with a cartilage knife until the joint could be flexed and extended to the normal limits. After careful hemostasis the cavity was filled with paste, the wound closed without drainage and the arm put up in a plaster-of-paris bandage in full extension. In two weeks the dressings were removed and the wound found to be perfectly healed. A plaster splint was then applied with the arm flexed to a right angle. At the end of about five weeks all dressings were removed, passive motion employed and the boy encouraged to use the arm.

The arm at the present time is very much improved, although somewhat restricted in both flexion and extension. I am satisfied that the presence of the paste, by keeping the raw surfaces apart enabled me to secure a much better result than I otherwise would.

Case 2.—Rose W., of Loretta, Minn., 19 years of age, with a well-marked tuberculosis of the elbow and failing health. Operation at the Northwestern Hospital Aug. 19, 1904. Through a straight posterior incision a complete excision of the joint was made, all of the synovial membranes and the ends of all three bones being removed, leaving quite a large cavity but no trace of disease. After most careful hemostasis the cavity was completely filled with the bone plug and the wound closed without drainage. Over a copious dressing a plaster bandage was applied with the arm in full extension. Very little pain or reaction followed and at the end of two weeks the dressings were changed and the stitches removed. The wound was healed with the exception of one small point where some blood serum was escaping. A copious surgical dressing and plaster splint were applied with the arm in extension as before. After three weeks the dressing was removed and the wound found perfectly healed. The arm was then flexed and a plaster splint applied. Two months after the operation all dressings were removed and the patient advised to begin careful use of the arm. On December 17, four months after the operation, the patient reported for examination. She has gained over twenty pounds in weight and has the most perfect result I have ever seen after a complete excision of the elbow. With the patient standing and the arms hanging there is no perceptible difference between them. She has complete extension and supination. She can pronate freely, can readily grasp her nose and can even do up her back hair with the operated arm. No trace of the bone plug can be felt. The bone plug, by filling the dead space and keeping the bones well apart, gives nature a chance to form a new joint, at the same time, by its gradual absorption, it allows the bones to approximate so as to prevent a flail joint. The lateral motion in this joint is only perceptible when one takes hold of the arm and bends it sidewise. It is evident from my experience in this case that when the soft parts are extensively involved it would be better to provide for temporary drainage of blood serum.

Case 3.—Mrs. M. R., of St. Paul, aged 49. Early in 1904, at a St. Paul hospital, this patient had the ninth rib removed from her left side for tuberculosis. The wound was packed with iodoform gauze and was about six months in healing. When she came to me early in September there was an extensive tubercular infection of the fascia in the epigastric region and of the ninth costal cartilage on the right side. Sept. 9, 1904, at the Northwestern Hospital, I lifted an extensive flap from the epigastric region and dissected out the diseased tissues. The wound was closed without drainage. An incision was then made over the tender swelling along the rib and cartilage. The whole cartilage of the ninth rib was found loose in a bed of tubercular granulations. The cartilage was removed, the granulations curetted away and the cavity filled with 95 per cent. carbolic acid. This was followed by alcohol and the cavity thoroughly dried. The cavity was then poured full of the melted bone plug and the wound closed without drainage. The stitches were removed on the eighth day. Union was perfect throughout, although there was considerable effusion of serum under the larger skin flap in the epigastrium. This all disappeared without leakage and in two weeks the patient went home free from pain and temperature. Two months after the operation there was no depression at the point where the cartilage had been removed, showing that the gradual absorption of the plug had enabled nature to fill in the space without deformity. This case demonstrates the advantage of filling a cavity with the bone plug over the open method with gauze packing.

Case 4.—Sam S., of Iron River, Wis., aged 28. The patient was suffering from hypertrophic osteoarthritis of the left hip. November 20, at the Northwestern Hospital, I removed the roughened hypertrophied head of the femur through an anterior opening. Hemorrhage from the bone was very severe, which required temporary packing and hot water to check. It was impossible to check it entirely so as to allow me to fill the cavity with the bone plug at once, as I had hoped to do. The cavity was packed with iodoform gauze, which was left for two weeks. Notwithstanding the fact that I had repeatedly tested the temperature of the hot water used to check the hemorrhage with my hand, it was so hot that it caused necrosis of the subcutaneous fat and quite a slough around the wound. However, by careful cleansing and free use of 95 per cent. carbolic acid, I was enabled to pour in the bone plug when the packing was removed after two weeks. The patient has been practically free from temperature and pain since the introduction of the plug and is making a more rapid recovery than he would under any other treatment with which I am familiar. It is extremely doubtful if an infection of the
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TREATMENT OF TUBERCULOSIS.

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ent rests on the hygienic tripod —pure air, special diet, and rest, rest including exercise. This seems so simple as to require very little study on the part of the physician. Indeed, the danger is that the public may come to believe that there is scarcely need for a physician, once the diagnosis is made. Only recently a lady asked me to give her, by telephone, directions for the fresh-air treatment of consumption, which she wished to send to an acquaintance in another city. Fresh air day and night, milk and eggs in abundance, and rest when the temperature is above 100 degrees—that seems to some to be all there is to it.

If there be a specific in medicine it is mercury and iodid of potash for syphilis; but what different results are obtained by different physicians in the use of these two drugs!

In no other disease is it more essential that we treat the patient and allow the disease to take care of itself than in pulmonary tuberculosis. Thousands of patients get well without a physician; many of them never suspect they had the disease.

Tuberculosis is a fight between the bacillus and the body, which makes use of its vital force to kill, to expel, or to capture and imprison the invader. The struggle is often a losing one because these bodily forces were originally lacking or weak, or because they were not supported and augmented by proper hygienic measures at the right time. That is, modern treatment was not instituted until the bacillus and its toxins had gained such an ascendancy as to make resistance impossible.

Individuals differ so much, and tuberculosis varies so greatly in its effect on the patient, that no two cases can be exactly alike; nor will precisely the same treatment be appropriate in both. Broad lines may be laid down, but there must be constant departures and variations in detail if the patient is to secure the greatest possible benefit from treatment.

Of first importance is pure air for every hour in the twenty-four. It is not possible to have the air in any enclosure as pure as the air out of doors, though we may approach it. An open window in one wall of a bedroom with all other openings closed will not afford pure air. With cross ventilation it is much better.

If a patient must occupy a bedroom there is a choice in location, and the physician should decide. A room facing south is preferable; extra windows may be cut. A fireplace and chimney help in ventilating the room, but soft coal gives off too much dust. The floor should be bare, painted, and with cracks filled. It is advisable to have the walls painted for from three to four feet from the floor, or covered with washable paper. No broom or dusting brush should ever enter this room; the floor should be wiped with a moist cloth every day. None but the patient should occupy it.

It is needless to say that the most scrupulous care should be taken of the sputum. Patients may reinfect themselves as well as others. The temperature of the room may be kept at 50 degrees, or even 55 degrees, if pure air is not shut out to do it. We should aim to have patients comfortable, but they easily support low temperatures if constantly exposed to cold pure air.

Where patients eat with the family, and spend a part of their time in living rooms heated to 75 degrees or more, they may complain of the cold. The family must make sacrifices for the sake of good ventilation, if the patient is to spend much time with them.

The patient may secure pure air at night by pushing the head of his bed out of the window. I know of a case where this plan has been followed every night for more than a year. Most of the patients in sanatoria in the Adirondacks sleep on verandas even in winter. These usually have sliding glass windows to shut off direct winds. A suitable portico may be found in a private dwelling and arranged so that the patient may use it both for a day room and for a sleeping place.

Tents may be used. Canvas is practically air-proof, hence sails are made of it. An ordinary tent with curtains down is a bad place for a consumptive. There are a few good ventilating tents on the market, but they are somewhat expensive.

To aid patients to support lower, and especially sudden changes in. temperature a daily sponge bath and brisk rub are useful. It may be necessary to commence gradually, with alcohol and tepid water; some patients do not react well, and these the cold bath may harm. The cold sponge stimulates many bodily functions, and is usually of great help. Direct sunlight is a potent stimulant, and sunbaths, exposing the naked body, may be used at times with advantage.

Suitable arrangements should be made for those who must rest lying down most of the day. They may have a comfortable reclining chair in a sheltered nook out of doors. Covers of the right sort must be provided, and possibly, especially in the beginning, artificial heat. Nose and ears must be guarded from frostbite.

Clothing should be warm but light and porous. and wool is the best. Pettenkofer has shown by the use of tiny anemometers that currents of air are constantly produced in our clothing. This is especially marked in clothing of loose texture. These air currents carry off body emanations. A flannel night-dress (a woolen bath robe is good) is needed at night in winter. Walking patients should go out in all kinds of weather except in a driving rain or wind storm. The feet should be kept warm and dry.

Many other points could be mentioned, and may need to be made use of, in providing for the pure air and outdoor life so essential in these cases.

Food and feeding come next. Dettweiler said: "The kitchen is my pharmacy!" The patients need an abundance of fatty and nitrogenous food. In taking the history of cases, so far I have found but one with a fondness for fat; nearly all the others expressed repugnance for it. Loss of weight is a common but by no means universal symptom of pulmonary tuberculosis.

The appetite is usually impaired or lost. Ability to digest food is nearly always in excess of the appetite. Adroitness and firmness may be required to get patients to eat enough, and artificial digestants may be of temporary use. Milk and eggs are exceedingly useful to supplement other food in many cases, but some patients can not take them. There are few. however, who can not digest and assimilate these articles.

Some excellent authorities, mostly the Germans, favor five meals a day, but many of the German people habitually eat five times a day. In most cases, I would advise three regular meals a day, with meat twice, and milk and eggs or other supplemental food in the forenoon, afternoon and at bedtime. Dr. Flick thinks he has better results in giving patients but one meal a day, supplementing this with rather large quantities of milk and eggs.

Here again the individual must be studied. Where weight has been lost we must try in every way to restore it. If the weight has always been below normal for the height, we should endeavor to get above the weight before illness. A few patients gain enormously, and are show patients in some sanatoria. It is not wise to go too far, however; flabby fat in excess of natural weight is rather harmful than good.

This part of the treatment, for patients at home, will usually cause the physician much trouble. There is always hope for a consumptive who has appetite and a good digestion, and any treatment, drugs or other things that tend to destroy either are certainly harmful.

There are great variations in regulating rest and exercise. It has been laid down as a rule by some authorities that a daily temperature of over 100 degrees demands absolute rest, and this fits many cases, but not all. Gentle exercise, in some patients, especially those of the nervous type, seems even to help lower temperature; some patients do well with morning exercise and afternoon and evening rest.

Other features of the case help decide the matter, especially the heart. The heart muscle is often affected. and may be easily overstrained. I know of a case where the patient was given much physical exercise, including long bicycle rides, greatly to his detriment.

Nature, as far as possible, puts a diseased lung to rest. There is less movement of the ribs and of the diaphragm on the affected side, and this is a point in diagnosis. It may be necessary to help nature in this, and a reclining position will give the lungs the most rest. I can not agree with those who would give lung exercises in the acute or in the advancing stage of tuberculosis.

Rest and fresh air improve the quality of the blood, and increase the hemoglobin, which is deficient in this disease. There should be rest before and after eating, as it greatly aids digestion. Rapidly wasting patients should be given complete rest, but it must be remembered that muscular movement greatly aids blood circulation, and in turn, digestion and assimilation. Rest cases may often have massage in bed, as recommended by Dr. Weir Mitchell in nervous cases, to improve the circulation.

Brehmer was an advocate of hill climbing, beginning with gentle grades and always starting up hill. Febrile cases should usually be put to bed and kept there for ten days or two weeks. When there is only slight afternoon temperature, these patients may be started off with a slow five minutes' walk in the morning. Afebrile cases may usually take gentle exercise *ad libitum* short of much fatigue.

Exercise, however, must be prescribed like morphin—by its effect—and it is perhaps the thing most needful of medical direction.

The mental side of the case requires much attention. No patient will long carry out the treatment here recommended without implicit confidence in his physician. This enables the physician to inspire hope and to give encouragement. We do not understand, but must acknowledge the potent influence of the mind over the body, therefore we should use the patient's mind as well as our own in treating tuberculosis; and the great impressibility of many of these patients must be taken into account. Dettweiler found that emotional music, an exciting book, a close game of cards, would often elevate the temperature and do harm. We must provide and regulate the amusements of most of these cases, and usually, for a time, they must be cut off from church, the theater or other crowded assemblies. There is, indeed, nothing a tuberculous patient may do that is too trivial for the physician's notice; a seemingly little thing may turn a doubtful case.

The successful treatment of pulmonary tuberculosis depends very largely on an early diagnosis, and the patient must be plainly told of his condition in order to get him to carry out hygienic treatment. It is still too frequently the case that the lungs are found much involved before the physician pronounces that ominous word—tuberculosis. Suspected cases should be repeatedly examined—such patients are wronged by telling them there is nothing the matter.

A patient run down from any cause will be benefited by the hygienic treatment recommended for tuberculosis, and we can well afford to give the patient the benefit of the doubt.

Nothing has been said of drugs. They are seldom made use of in well-conducted sanatoria. They should be resorted to only when positively indicated to relieve symptoms that are harming the patient. They should still be withheld if this can be accomplished in another way. There is no specific for tuberculosis unless Maragliano has discovered one, and for the proof of this we must wait, and may wait long.

What has been said applies mainly to home treatment. It is usually, but not always, better to send a patient to a sanatorium; but we should carefully study him before deciding on this, and his character and disposition as well as the progress of his disease must be taken into consideration. In selecting a sanatorium, the physician in charge is of more importance than climate or location.

Even a month's training in a well-managed sanatorium is generally of great value to the patient, and home treatment may then be carried out without difficulty. I strongly protest against sending patients away for a change in climate without medical control. Improper food, stuffy bedrooms and ill advised exercise are as harmful in Colorado as in Ohio. We should know in advance what the patient's surroundings will be, and should place him under the care of a competent physician. Some patients will do better at home than under the most favorable conditions elsewhere, and here again, the patient's disposition must be studied.

In conclusion I would emphasize three points:

First, the supreme importance of early diagnosis.

Second, the strict enforcement of a daily régime, reduced to writing, and carefully planned for each individual case.

Third, the necessity of a comprehensive understanding of the character of the patient, a knowledge of the nature and extent of his lung lesion, and a full appreciation of the importance of even the minute details of his environment.

THE IMPORTANCE OF AN EARLY DIAGNOSIS IN CANCER OF THE UTERUS.*

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There are two forms of cancer of the uterus which we must consider. The more frequent form arises in
he cervix of the uterus and grows more rapidly than
and p er form and sooner invades, by extension or
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cles and usually has not been made until after the
should be extended beyond the uterus, and, therefore,
the mucous treatment of this condition has been most
pedicle belov. On the other hand, the form of growth
the skin kept the fundus of the uterus is much rarer,
substitute for
secured, as in
1898. The rest grows more slowly, and remains restricted to the uterus for a much longer time. For these reasons the diagnosis is made earlier in the course of the disease and the operative treatment of cancer of the fundus is attended with a lower primary mortality and a much higher percentage of cures. In this communication I wish to refer especially to carcinoma of the uterine cervix, and, unless otherwise stated, that will be the form understood throughout the paper.

Cancer of the uterus needs the attention of the medical profession of this country for the following reasons:

1. Dr. Welch[1] has shown from his analysis of over 31,000 cases of cancer, collected from various sources, that the uterus is the organ most frequently affected by primary cancer, forming somewhat less than one-third of all forms of cancer. There have been 11,382 patients admitted to the gynecologic department of the Johns Hopkins Hospital during the fifteen years of the existence of the department ending Aug. 17, 1904. Of this number 412, or 3.6 per cent., suffered from carcinoma cervicis uteri.

2. Unfortunately cancer of the cervix is a disease of midlife. Over 94 per cent. of these 412 cases were over 30 years old, and less than 7 per cent. over 60. The number of cases for any decade between the ages of 30 and 50 years was quite evenly distributed. The number of cases occurring between the ages of 30 and 40 was nearly as great as that of those occurring between the ages of 40 and 50, each forming about 30 per cent. of the cases; and the number of cases between the ages of 35 and 45 was a little greater than any other decade, forming about one-third of all the cases. The oldest patient was 70; on the other hand, six patients were less than 25 years old, three of these being 22. When, in addition to the above, one considers that nearly all of these cases have borne children, for only about 3 per cent. of the 412 cases had never been pregnant, and that the disease apparently runs a more rapid course in young women, and that pregnancy seems to increase the rapidity of the growth, we must realize that those are afflicted by cancer of the cervix who are most important for the welfare of the home, and at a time when they can least be spared.

3. The clinical course of cancer of the cervix is usually most distressing, with the foul discharge, recto-vaginal and vesico-vaginal fistulæ, and pain which can only be controlled by morphin; all of which are so apt to be associated with the advanced stages of this disease. As so many of the cases recur after operation, we realize that the above fate has been only temporarily postponed in a large percentage of the cases operated on.

We all recognize the importance of an early diagnosis in the cure of any diseased condition and that this can be best accomplished by the proper education of the medical profession and through it the people, for whose welfare it is directly responsible.

The above is especially true in regard to carcinoma cervicis uteri, because:

1. It can be cured in a large percentage of the cases if operated on in its incipiency.

2. A diagnosis should be made in the majority of the cases before the disease extends beyond operative relief, for in about 76 per cent. of the 162 operable cases and in about 81 per cent. of the 250 inoperable cases there had been a history of bleeding for over three months before the patient came to the hospital, and bleeding had been

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tion on Gynecology in the Medical Department
Congress of Arts and Science at St. Louis,
me the author was Resident Gynecologist,
ital.)

[1] Welch: Pepper System of Medicine, vol. ii, p. 533. Lea Brothers & Co., Philadelphia, 1885.

present for over six months before their admission in about 51 per cent. of the operable cases and in about 60 per cent. of the inoperable cases.

3. Of the 412 patients admitted to the Johns Hopkins Hospital with cancer of the cervix, 250, or 61 per cent., of the cases came too late for anything but palliative treatment, and in addition many inoperable cases were refused admission, thus making the percentage of inoperable cases applying for admission considerably greater than 61 per cent. Even of the 162 patients who were operated on we can not hope that 25 per cent. will be living and apparently free from cancer five years after operation. The failure to obtain these cases earlier is due to—

1. Ignorance on the part of the patients, who consider a bloody vaginal discharge of no consequence, or, through the dread of an examination, delay in consulting a physician until after the growth has extended beyond operative treatment; and, in addition, many believe that if it should be cancer they can not be cured and prefer to remain ignorant of their true condition.

2. The failure of physicians to examine patients who come to them complaining of a bloody vaginal discharge or with other symptoms referable to a diseased uterus, and the inability of many physicians to recognize cancer of the cervix even when it should be recognized, for physicians who have brought patients to that hospital have said that it began as an ulcer of the cervix, which they treated locally with astringents, then curetted, and finally it became cancerous.

3. Malpractice on the part of the physician who knowingly treats such conditions locally for the daily or weekly fee.

4. Growths which do not give rise to any symptoms until after they have extended beyond operative relief. Fortunately these probably form only a small percentage of all the cases; for only about 19 per cent. of the 250 inoperable cases did not have a history of bleeding for over three months, and in nearly all of the cases in which bleeding was either absent or of short duration there were other symptoms present which should have called attention to the local trouble long before it was diagnosed.

The remedy of the above lies in the better education of the physician, so that even if he is unable to make a diagnosis he will undertake means to find out the cause of the trouble. Through the physicians the women of this country should be made to realize that any unnatural vaginal discharge or other manifestations of local trouble may be indicative of some slight disorder which can be easily remedied; or, on the other hand, may be the first symptom of a cancerous growth which, if recognized in time, may be cured.

THE CURABILITY OF CARCINOMA CERVICIS UTERI.

Many physicians believe that cancer of the uterus is incurable, and through them the laity have a similar belief. Patients have been admitted to that hospital who have been told by their physicians that if they have cancer they can not be cured, and physicians have asked if a case of cancer of the cervix had ever been cured. There are at present sixteen women living and apparently well five years and longer after a hysterectomy has been done in that hospital for carcinoma of the cervix. In four of these cases more than ten years have elapsed since the operation. In all but one of the sixteen cases above referred to the clinical diagnosis was confirmed by the use of the microscope. It must be admitted that the growth may return after five years, but the percentage of cases in which it does is very small. One of the patients died at the end of six years from general carcinosis without a local return, and a third patient was apparently well for over five years when a bloody vaginal discharge appeared and a recurrence was found in the vaginal vault. On the other hand, out of 60 patients who have died from a return of cancer of the cervix after operation, and the date of whose death was known, only 4 lived over four years after the operation. Three of these four cases have been mentioned. Of these 60 patients, 26, or 43 per cent., died within the first year, and 44, or 73 per cent., within two years, and 52, or 86 per cent., within three years, and 56, or 93 per cent., within four years of the operation.

WHAT PERCENTAGE OF THE OPERABLE CASES CAN WE HOPE TO CURE?

The comparison of statistics is very unsatisfactory, for many surgeons will operate on favorable cases only and will include in their statistics those cases alone in which they think that the entire growth has been removed; while others (as has occurred in the Johns Hopkins Hospital) have recognized before the operation that the growth was probably ineradicable and at the close of the operation have given an unfavorable prognosis, thinking that the entire growth had not been removed. Generally the unfavorable prognosis has been speedily confirmed; on the other hand, we have had the satisfaction of seeing a few cases in which the patients are apparently well five years and more after the operation, but which were considered unfavorable even at the close of the operation. On account of the above, we had counted as operable all cases in which hysterectomy had been done, irrespective of the nature of the prognosis given at the time of the operation. Previous statistics[2] published by me were made on this basis. In reviewing the cases for the present communication three cases were removed from among the previous operable ones and placed among the inoperable ones. While a hysterectomy had been done in these three cases, the operation was clearly only a palliative one, for no attempt was made to remove all the diseased tissues. On account of this, there is a slight difference between the percentage of cures in this and in the previous publications.

There have been 84 cases in which five years or longer had elapsed since operation, 8 patients died as the result of the operation, and we have been unable to hear from 10. Of the 66 patients of whom we have been able to keep track, the growth reappeared in 50, or 75 per cent. of the cases; and at present 16 patients are living and apparently well, namely, 24 per cent. of the 66 patients heard from. We know that 16 of the 84 patients operated on, or 19 per cent., are at present apparently free from recurrence. Of the 162 patients operated on in this hospital we can not hope that 25 per cent. of them will be living and apparently well five years and more after the operation, for to the percentage of recurrences must be added that of the primary mortality. Two things are obvious: First, that cancer of the cervix of the uterus apparently can be cured, and, secondly, that had these operable cases been diagnosed earlier (and we realize that in over 50 per cent. of these cases there was a history of bleeding for over six months) the percentage of cures would have been greater and the primary mortality less, for the greater the extent of the growth the less the resistance of the individual and the more severe the operation necessary for its removal, and, in addition, the more likely the return of the diseased condition.

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[2] Sampson: The Importance of a More Radical Operation in Carcinoma Cervicis Uteri as Suggested by Pathologic Findings in the Parametrium. Johns Hopkins Hospital Bulletin, 1902, vol. xiii, 299-307.

PROGNOSIS IN CARCINOMA CERVICIS UTERI.

A positive diagnosis of this condition can only be made by the microscope, and I should liked to have considered only such cases in this paper, but, as the microscope had been used as a means of diagnosis in only a little over one-half of the inoperable cases, we would have to exclude all those cases which had not been so diagnosed and yet which we realized were cancer. The elimination of a large number of the inoperable cases and of only a small number of the operable ones would give rise to a false conception both of the prevalence and of the operability of cancer, and the changes in its operability from year to year. While we tried to exclude all sources of error in compiling these statistics, we nevertheless realize that they do exist, and for these reasons the percentages in this article must be considered only as approximately correct. Of the 162 operable cases the clinical diagnosis has been confirmed by the use of the microscope in all but 10, and the history of these cases before and *after* operation, together with the description of the pelvic examination and operation, were such as to leave little doubt as to the correctness of the clinical diagnosis, especially as only one of the 10 cases appears in the list of apparent cures. On the other hand, in many of the inoperable cases, the patients were not curetted, and so tissue was not obtained for microscopic examination; but, as the diagnosis of these advanced cases is even more easily made than in the operable ones, there can be little doubt of the correctness of the diagnosis in the 250 inoperable cases, especially as we have not been able to hear of any of them who have lived over three years after the diagnosis was made in this hospital. The only source of error is that in a very few cases the disease may have started in the fundus and the cervix become involved secondarily, and the diagnosis should be carcinoma of the fundus with secondary involvement of the cervix; and a few may have been sarcomata.

It is impossible to keep track of all the patients, because many are admitted to the hospital through the dispensary. These patients are, for the most part, poor, many can not speak English, and others are colored. They belong to the so-called "floating population," who live wherever they can obtain work. In every instance, the hospital has not only the name and address of the patient, but also that of a relative or friend and, in addition, that of her family physician, if she has any. In spite of these three sources for obtaining information concerning the patients after they leave there, we are usually able
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cles a from Baltimore, while we are unable to keep
should f the greater part of the poor of that city.
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1898. The res eration, and of this number we have
track of all but 10 after they left the hospital; while of the 250 inoperable cases we have been able to obtain information from only about 100 patients, because we have not been following them so closely as we have the operable cases, and, then, more of the inoperable cases occur among the poor than among the better class of patients.

In making a prognosis in cancer of the cervix one must consider—

1. The clinical course of the disease not operated on.
2. Whether or not one can determine the extent and further course of the disease from the history of the case, pelvic examinations, findings at operation and a study of the specimens removed.
3. The clinical course of recurrences.

I. THE CLINICAL COURSE OF THE DISEASE NOT OPERATED ON.

Cancer of the cervix usually gives rise to one symptom which can usually be easily recognized by the individual, and that is bleeding. The bleeding may be very slight, "only a show," appearing at intervals, as on exertion or after coitus or after using a douche; or it may be slight, but constant, the patient noticing that her clothes are slightly soiled on taking them off at night. In other cases the bleeding is more profuse, so that it may appear like a prolonged profuse menstrual flow or as an irregular menstruation or a return of the flow after the menopause. In still other cases there may be severe hemorrhages, so severe that the patient may faint. These hemorrhages may occur without any apparent cause or following some unusual exertion. By this usual manifestation of the growth, in many instances, we have a probable means of estimating the duration of the disease. In some cases bleeding may be absent or present only in the later stages of the disease, but such cases are apparently less frequent; and, even in these cases, other symptoms are usually present which should make the patient realize that something is wrong and so lead to an examination and diagnosis, as has been mentioned.

We realize that certain factors must influence the rate of growth. Certain types of cancer may grow more rapidly than others and sooner invade the neighboring parts by direct extension or by metastases. Also, some individuals may be less resistant to the extension of the growth than others, and apparently the growth is slower in women past the menopause, while in younger women it seems to run a more rapid course, and pregnancy seems to hasten the rate of growth. In considering bleeding as giving us an idea as to the duration of the disease, before the patient entered the hospital in some of the cases, we find that in the operable cases, as compared with the inoperable, bleeding was absent in about 9 and 6 per cent. of the cases, while it was present for over three months in about 76 and 80 per cent.; over six months in about 50 and 60 per cent.; over one year in about 20 and 29 per cent.; and over two years in about 7 and 9 per cent. of the cases. We have been able to learn the date of death in 90 of the inoperable cases, and 75 per cent. of these patients lived less than one year after leaving the hospital and over 50 per cent. lived less than six months, and only two of the 90 patients lived over two years after leaving the hospital. The duration of the disease as indicated by bleeding in these 90 cases was less than three years in 92 per cent. of the cases and over six months in 75 per cent. and from one to two years in 45 per cent. of the cases. There have been two among the 250 inoperable cases in which there has been a history of bleeding for five years before the patient's admission, and there were two patients among the operable cases with a history of bleeding for three years before admission. If we take bleeding as usually giving the first indication of the disease in some of the cases we must conclude that the disease seldom exists with this clinical symptom for over three years, and that three-quarters of the patients die within two years, and about one-third within one year after the appearance of the first sign of bleeding.

Patient.—Mrs. E. L., aged 34 (Gyn. No. 7493), was admitted to this hospital in January, 1900. Bilateral ovarian cysts were removed, together with the uterus and appendix, a supravaginal hysterectomy having been done, leaving in the cervical stump.

Present Illness.—The patient was readmitted (Gyn. No. 11404) in July, 1904, complaining of bleeding of eight months' duration.

Examination.—On examination an extensive cancerous involvement of the cervical stump was found, which extended along the anterior vaginal wall almost to the external urethral orifice. The cervix was apparently normal at the previous admission, and this entire change must have taken place since she left the hospital a little over four years ago, and, judging from the symptoms, was only of eight months' duration. This is the only instance we have been able to find of cancer of the cervix developing after the patient left this hospital.

II. CAN A PROGNOSIS BE MADE AT THE TIME OF THE OPERATION?

Under this head one must consider the history of the case, what may be learned from an examination and also what is found at operation and the results of a study of the specimen removed.

Prognosis Made from the History of the Case.—Of 26 cases living and apparently free from cancer three years and more after operation 20 per cent. had bleeding as a symptom for over one year and 45 per cent. had the same symptom for less than six months. In 74 cases in which a recurrence occurred after operation 16 per cent. of the patients had bleeding as a symptom for over one year and 47 per cent. had the same symptom for less than six months. One must conclude that a history of bleeding over a long period does not necessarily imply that the disease is far advanced, or if the period is of short duration that the disease is also "very early." On the other hand, a history of no bleeding or one of short duration may reveal an extensive growth, as shown in the study of the 250 inoperable cases, where in 19 per cent. of the cases the bleeding was either absent or of less than three months' duration. Again, when the bleeding has existed over a long period of time, as over a year in 20 per cent. of the 26 cases free from recurrence three years and more after operation, it may indicate that in the case in question the disease grew very slowly, due either to the type of growth or to resistance of the individual; and on this account the prognosis may be favorable. One patient (Gyn. No. 5853, squamous cell carcinoma) had a history of bleeding, apparently due solely to the cancer, for over three years before coming to the hospital. She is at present living and apparently well, seven years after the operation, although an unfavorable prognosis was given at that time.

Prognosis Made from the Examination of the Patient.—Usually if the uterus is fixed in the pelvis one thinks that the disease has extended beyond operative relief, and if freely movable that the prognosis is favorable. One must remember that the disease may be associated with an inflammatory condition of the pelvic organs and that the movements of the uterus may be limited by adhesions of inflammatory origin and not by an extension of the growth. Wertheim[3] has shown that even in those cases in which the parametrium is apparently thickened that this thickening may not be due to cancer. He has emphasized the fact that the presence of cancer in the parametrium can only be diagnosed by the use of the microscope, for an apparently infiltrated condition of the parametrium is not necessarily carcinomatous and a "natural-feeling" parametrium does not exclude cancer. There is also no relation between the size of the primary growth and the presence or absence of cancer in the parametrium or pelvic lymph nodes, for the growth may be very large and still limited to the cervix. On the other hand, a small primary growth may give rise to metastases to the parametrium and pelvic lymph nodes. It is evident that a prognosis can not always be made before operation, or even afterward, for the surgeon may think that he has removed the entire growth and yet it returns; and in another case he may feel confident that he has not been able to remove it all, and the patient recovers and is living and apparently free from recurrence long after the operation. We have had such cases, and in one instance (squamous cell carcinoma) eleven years have elapsed since the operation, and the patient is apparently well and free from a recurrence, although it was thought that the entire growth had not been removed by the operation.

Prognosis Made from a Study of the Specimen Removed.—In looking over our pathologic records I find that a prognosis was made from a study of the specimen removed in twelve of the sixteen patients who are apparently free from a return of the disease, five years and longer after operation. In three of the twelve cases the prognosis was favorable, as "very early" or "entirely removed;" in three other cases the prognosis was questionable, while in six cases the prognosis was unfavorable, as "apparently not all removed," "disease far advanced," or "the growth extends out to the cut surface of the specimen removed;" and all these cases are apparently cured. In studying the pathologic records of 29 specimens from patients where the growth recurred and a prognosis was made by the pathologist at the time the specimen was studied I find that it was favorable in 8 of the cases and unfavorable in 21. It is evident that, with our present knowledge of the subject, a prognosis can not be made from the specimen removed.

It is along these lines that work is especially needed; i. e., a classification of the various forms of growth, a careful study of the specimens removed, determining whether or not and how the growth invades the neighboring parts. Reconstructions of the relation of the growth to the uterus and surrounding parts should also be done. This work may show us that different types of cancer grow in different ways, some slow, others rapid, some causing metastases early and others causing them rarely or never. The mode of growth in any case may give us knowledge concerning the malignancy of that growth in that particular case. As we may determine the variety and virulence of an infectious organism by the way it grows and by the changes it produces in various culture media in the mucus membrane of the uterus and vagina, so we may study the growth of cancer by the changes it produces and by the manner in which it invades the uterine wall and the surrounding parts, and whether or not and if so how it wanders to distant parts. All of these structures may be looked on as culture media for the growth and cultivation of cancer. The form of growth and the changes produced in the various tissues and structures included in these parts should enable us to classify the different types and to determine the malignancy of each type. The further clinical histories of these cases will control and modify the results of our pathologic studies. These studies may not lead to the discovery of the cause of cancer, but by them we may become thoroughly familiar with the pathologic changes produced by it and their clinical manifestations, so that we may recognize the conditions present sooner and more wisely and efficiently combat this disease. The duty of the physician is to do the best for the patient with what knowledge he has, and it is along these lines that knowledge is needed most in the treatment of cancer of the uterus. Even if the cause of cancer should be discovered, we have no assurance that by this discovery we will be any the better able to deal with it.

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[3] Wertheim: Zur Frage der radical Operation beim Uteruskrebs. Arch. f. Gyn., 1900, vol. lxi, No. 3, p. 662. Also Kundrat: Über die Ausbreitung des Carcinoms in parametranen Gewebe bei krebs des Collum uteri. Arch. f. Gyn., 1903, vol. lxix, p. 355-409.

III. CLINICAL COURSE OF RECURRENCE.

Many important questions may be asked in regard to the apparent reappearance of cancer following operation.

Is there ever a true reappearance of the growth, i. e., does cancer ever recur in a place where a similar growth has previously been entirely removed? Such a thing is not impossible, but the so-called *recurrence* is usually a remanifestation of a growth which has not been entirely removed.

In what percentage of the cases operated on will the disease reappear? We realize that probably at least three-quarters of the 135 patients who have been operated on in this hospital and who have survived the operation, will die from cancer.

Where does the recurrence take place? It is difficult to determine whether the disease starts from a portion of the primary growth not removed or from a metastasis. Many of our patients come from a distance and others are among the very poor, so that the number of patients whom we could examine at intervals is very small; and even if we could the exact origin of the recurrence could not always be determined. The appearance of a local recurrence in the vaginal vault does not exclude a simultaneous extension of the growth from diseased lymph nodes.

Even if the recurrence takes place, has the patient been sufficiently relieved to warrant the operation? I think this can be answered in the affirmative. While out of 60 patients who died from a recurrence of cancer of the cervix, and the date of whose death we know, only 34 patients, or 57 per cent., lived over one year after the operation and only 8 patients, or 13 per cent., lived over three years; nevertheless, several patients have been relieved for over a year, feeling "as well as they ever felt" during that time, and four patients were apparently relieved for over three years.

Another important question is, Can we ever hope to cure a recurrence of cancer of the cervix?

Patient.—Mrs. Z. M. S., aged 33 (Gyn. Nos. 1723, 2115 and 2220), was admitted to this hospital with a diagnosis of cancer of the cervix, "the cervix being represented by a protruding fungoid mass." A vaginal hysterectomy was done Dec. 17, 1892.

Recurrence.—The patient was readmitted in June, 1893, and an apparent recurrence in the vaginal vault was cauterized with a Paquelin cautery. The patient left the hospital and was readmitted three months later, when the recurrence was excised. A letter was received from her in July, 1904, nearly eleven years after the operation, in which she stated that she felt perfectly well and that there was no evidence of a return of the growth.

Examination of the Growth.—Microscopic studies of the mass excised as a recurrence show that it is an epithelial growth with a great proliferation of the surface epithelial cells, and while there is but little invasion of the underlying tissue, the growth must be considered an epithelial cancer. One would judge that it grew very slowly. Unfortunately I have not been able to find the original tumor, which is described as *a fungoid mass occupying the cervix*, and we are unable to positively consider this as a cure of a recurrence.

It is very doubtful if the operative treatment of recurrences is justifiable except in very occasional cases.

WHAT CAN BE DONE TO INCREASE THE PERCENTAGE OF CURES IN CARCINOMA CERVICIS UTERI?

Two ways present themselves—first, an earlier diagnosis, and, secondly, a more radical operation.

How May an Earlier Diagnosis Be Made?—If there was a history of bleeding for over six months in about 50 per cent. of 162 operable cases and in about 60 per cent. of 250 inoperable cases admitted to this hospital, *it seems that with the proper education of the medical profession and the laity this should not have occurred.* If the women of this country understand that uterine bleeding and also other symptoms referable to the uterus may be indicative of some slight disturbance which can be easily remedied, or, on the other hand, that it is usually the first symptom of cancer of the uterus, which, if taken in time, can be cured, they will not only consult their physicians early, but will also more readily consent to an examination and to operation if necessary. As long as women through ignorance disregard these symptoms and consider cancer incurable the present condition will exist. Frequently physicians do not realize the importance of making a diagnosis in such cases, for they often do not examine their patients, but give them some medicine "to stop the bleeding or to relieve the symptoms," or, if they examine these patients and find an "ulcerated cervix," they may treat it with local applications until it becomes cancerous; and also many share the belief with the laity that if it is cancer it can not be cured.

It is only by the proper education of the physicians and of the laity that this condition can be remedied.

In our own cases we can see the effect of education in increasing the percentage of operable cases, and thus the percentage of cures, in the following ways:

1. Each year there is an increase in the percentage of cases diagnosed before the disease becomes inoperable, as may be seen by comparing the percentage of operable cases admitted during the first year of the Johns Hopkins Hospital with those admitted in the later years.

The hospital has been open for over fifteen years. During the first five years 106 cases of carcinoma cervicis uteri were admitted with an operability of 28 per cent., as compared with 162 cases admitted the second five years with an increase in the operability to 32 per cent., and 144 cases in the last five years with a still higher percentage of operable cases, namely, 53 per cent., as compared with 28 per cent. for the first five years. Two factors must be considered in this increase in the operability of the cases—first, the education of the people, and, secondly, the use of the abdominal operation.

2. The percentage of cures is also higher, which is due to an earlier diagnosis and to a wider excision of the uterus and growth. As has been mentioned, 24 per cent. of 66 patients heard from are apparently free from cancer five years and more after operation. On the other hand, similar statistics taken three years ago show that only 12 per cent. of 41 patients heard from were living and apparently free from cancer five years and more after the operation.

3. The highest percentage of operable cases appear among the better educated and well-to-do women.

There are three wards open to gynecologic patients in that hospital, in which 11,382 patients have been treated, and of this number 412, or 3.6 per cent., suffered from carcinoma cervicis uteri. The private ward has received about 25 per cent. of all patients and about 26 per cent. of the cancer cases. The general or public ward for white patients has received about 59 per cent. of all cases and about 57 per cent. of the cancer cases, and the ward for colored patients about 16 per cent. of all cases and 16 per cent. of the cancer cases. The percentage of cancer cases in each ward has been about the same, namely, a little over 3.5 per cent. On the other hand, the percentage of operable cases is greatest in the private ward, as one would expect, and least in the ward for colored patients. There have been 110 cases of cancer of the cervix admitted to the private ward, of whom 45 per cent. were operable, as compared with 235 admitted to the free white ward, with an operability of 40 per cent., and 67 with only 23 per cent. operable admitted to the ward for colored patients. One interpretation of the above could be taken, and that is that the growth runs a more rapid course in the colored race; but the more correct one is that the patients admitted to the private ward are better informed and employ more competent physicians, and on account of both these factors the growth is diagnosed sooner than in those who are less fortunately situated.

Still another manifestation of education as a factor in the earlier recognition of this disease asserts itself. We have been able to hear from 125 of the 135 operable patients who survived the operation, after they have left the hospital, and only about 100 of the 250 inoperable patients, and we realize that it is easy to keep track of the well-to-do and educated people, while it is very difficult to keep track of the very poor. We have a right to infer that most of the inoperable cases we hear from belong to the better class of patients in the private and free white ward, and that the large number, 150 out of 250, whom we have been unable to hear from, must, for the most part, be among the poor and illiterate, thus demonstrating the higher percentage of inoperable cases among the poor than among the well-to-do.

The question arises, How should we educate the medical profession and the laity in regard to this matter? Clark,[4] in considering the importance of an earlier diagnosis in this condition, concludes that "the education of public opinion in medical subjects depends on the general medical practitioner," and we want "first an appreciation by the medical practitioner of the importance of the early recognition of cancer, and if this once is established it will soon be recognized by an intelligent contemporary public."

We must realize that it is difficult to reach or to change the views of all physicians who are in practice, and that it will take time for those just graduating to become influential in a community, and, as the result of the above, the education of the women through the family physician must be slow, especially as many women seldom consult a physician. The question presents itself as to whether or not it is justifiable to deal with the women more directly.

Winter[5] believes that, with the first appearance of symptoms, cancer of the uterus is always operable, and, influenced by this belief, he started a campaign against this disease in East Prussia. The results of this campaign have been published. In the year 1902 pamphlets were sent to all physicians and midwives in this region, and this was followed by a "warning to women," which was published in all the leading newspapers. As a result of this, family physicians not only examined their patients for cancer on the slightest suspicion, but the women consulted their physicians earlier and were more willing to be operated on. In one year the *operability of uterine cancer in East Prussia was increased from 62 to 74 per cent.* When one considers that during the last five years only 52 per cent. of the cases admitted to the Johns Hopkins Hospital were operable, and that many inoperable cases were refused admission, thus making the percentage of operable cases of all coming to the hospital considerably less than 52 per cent., the need and possibility of making an earlier diagnosis asserts itself.

THE IMPORTANCE OF A MORE RADICAL OPERATION.

In considering the prognosis made at the time of the operation in some of our cases, one is impressed that in certain cases in which the disease was apparently in a very early stage and the prognosis favorable, the growth returned, and that others are apparently cured where an unfavorable prognosis was made at the time of the operation on account of the extent of the growth. The above can easily be explained. In the apparently early cases, a hysterectomy was done with as little disturbance of the surrounding parts as possible, and on this account the disease was not all removed; while in the advanced cases a wide excision of the growth was indicated, and by doing this some of the patients were cured. It would seem that a radical operation was especially indicated in the so-called early cases, for the chance for a cure is not only greater, but the patient is in excellent condition, and, the uterus being freely movable, the operation can the more easily be accomplished, and on this account the primary mortality will be low.

WHAT MAY BE ACCOMPLISHED BY A MORE RADICAL OPERATION.

It should be the object of the surgeon to cure as large a percentage of patients as possible of all cases of cancer coming under his charge. In this hospital, we may hope to cure 20 per cent. of the cases operated on, but less than 6 or 7 per cent. of all the cases applying for admission. The surgeon, by operating on only the favorable cases, might have a large percentage of cures, and yet, by so doing, the percentage of operable cases would be small and also the cure of all patients seen by him. So the first demand is to increase the operability of cancer not only by an earlier diagnosis but by a more radical operation. On the other hand, the percentage of cures must always be discounted by the primary mortality. With a very extensive operation it may be possible to increase both the operability of cancer, and the percentage of cures, but, if the primary mortality is too great it is contraindicated, for that operation should be done which will give the highest percentage of cures of all patients treated, with the lowest primary mortality. Undoubtedly, the highest percentage of cures would be accomplished by removing all the pelvic lymphatics and with them the uterus and all the tissue from pelvic wall to pelvic wall, including the lower ends of the ureters, and implanting the renal ends of the ureters into the bladder. The results of ureterovesical implantations are uncertain, the danger of ascending renal infection great, for cystitis following these operations occurs in a large percentage of the cases. An implanted ureter is an injured one, which is not likely to protect the kidneys from ascending renal infection as efficiently as a natural ureteral orifice.[6] From a study of specimens removed by the more radical operation (in which an attempt was made to remove the pelvic lymphatics and all the tissue lateral to the uterus, with the primary growth and uterus, either freeing the ureters from this tissue or removing their lower ends with it), it was found that the disease by direct invasion or metastasis had extended beyond the uterus in 12 of the 15 specimens. In these 12 cases, hysterectomy alone would not have removed the entire diseased condition. In seven of these cases there was a direct extension of the growth from the cervix; there were metastases to the parametrial lymph nodes in four cases; while an apparent metastasis to a parametrial lymph space (at some distance from the cervix) was found in only one case. In twelve cases in which the pelvic (iliac) lymph nodes have been studied, cancer has been found in six. These studies are unfinished and further investigations of the same cases may show an even greater number in which the growth is not limited to the cervix. The study of these cases has shown that there is no relation between the size of the primary growth and the presence or absence of lymphatic involvement and that only by the use of the microscope can we make a positive diagnosis of the presence or absence of metastases in the parametrium or pelvic lymphatics.

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[4] Clark: Progressive Medicine. Lea Brothers & Co., Philadelphia, 1904, vol. ii, p. 131.

[5] Winter: Bekämpfung des Uteruskrebses in Ostpreussen, Cbl. f. Gyn., xxviii, p. 441, reviewed in THE JOURNAL, xliii, p. 229.

Are these more radical operations justifiable? Some claim that it is impossible to effect a cure in a case of cancer of the cervix if the disease has extended beyond the uterus, and on this account the vaginal hysterectomy is indicated, for it is attended with the lowest primary mortality. Of the 162 hysterectomies previously mentioned, 63 were vaginal, 26 combined abdominal and vaginal, and 78 abdominal. Comparison of the percentage of cures and also of the primary mortality in these three classes of cases is of no value, for the abdominal or combined abdominal and vaginal operations in many instances, have been used instead of the vaginal operation, because the growth was too far advanced for the vaginal route. It can never be hoped that the abdominal operation will be attended with as low a primary mortality as the vaginal; on the other hand, by the vaginal route the wide excision of the parametrium and pelvic lymph nodes is impossible. Whether one shall employ the vaginal route or the more radical operation in these cases, cannot be determined from statistics, for sufficient time has not elapsed since the use of the more radical abdominal operations to furnish enough cases to compare with those removed by the vaginal route.

Past clinical experience demonstrates the need of a more radical operation, and a study of the specimens removed by these operations show that the growth has invaded the surrounding tissues in a large percentage of the cases, 12 out of 15 cases studied in this hospital, and, on this account, hysterectomy alone seldom cures this condition.

Since the object of the surgeon is to save and not to take the life of the patient, these operations are justifiable only if they are not attended with too high a primary mortality, and for this reason we must clinically consider two distinct classes of operable cases from this standpoint.

1. Patients in whom the uterus is freely movable and the growth apparently early.

2. The cases in which the growth is apparently extensive and its removal difficult, the so-called "borderline cases."

In the first class of cases the patients are usually in good condition and the operation is relatively easy. In these cases, we should try to do as thorough an operation as possible. The lymphatics should be removed from the sides of the pelvis, the ureters freed, and all the tissue lateral to the cervix removed. (Later studies show that only a very small per cent. of the cases can be cured if the growth has metastasized.) We are thus able to improve the chances of a cure, and the patient being in excellent condition and the parts freely movable, the operation can be quickly accomplished and with a low primary mortality.

In the second class of cases, the patients are apt to be in poor condition and the extensive growth makes the operation very difficult. If the operation is indicated, the first demand is the removal of the primary growth, and the removal of the pelvic lymphatics should be a secondary consideration and should be reserved for the last and should be removed only if the condition of the patient warrants it, for we should expect to find them involved in only from 50 to 60 per cent. of these cases. In these cases, the operation is difficult and the primary mortality necessarily high, especially as the patients are apt to be in poor condition and unable to stand a severe operation. It seems that unless all can be removed, nothing should be tried, for severe operations are not justifiable for gaining very uncertain and temporary palliative results. These are the cases in which excision of the lower ends of the ureters and portions of the bladder is justifiable if indicated. By so doing, I believe that we may hope to cure some of these cases, for the parametrium apparently is able temporarily to check the further advance of the disease, and by a wide excision of the entire growth we should expect to cure these cases, unless metastases have occurred in parts which cannot be removed.

WHAT CAN BE DONE FOR THE EXTENSIVE INOPERABLE CASES.

The resection and reimplantation of the ureters above the growth, in order to prevent the threatened renal insufficiency due to the pressure of the growth on the ureters, does not seem to be desirable, for the relief can only be temporary. The attempts to starve the growth by the ligation of the blood vessels supplying these parts has given at the best only temporary relief, and, in a few instances, by interfering with the nutrition of these parts, has given rise to disastrous complications. We can not hope to cure these cases by the cautery, for the growth has involved the various neighboring structures, as bladder, ureters, rectum, large blood vessels and nerves, all of which would be injured by the extensive use of the cautery. It would seem that these cases should be treated as their symptoms arise, and one should attempt to relieve symptoms and not to prolong life, unless especially so desired by the patient and her friends, and on this account as little as possible should be done locally.

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[6] Sampson: Ascending Renal Infection, etc. Johns Hopkins Hospital Bulletin, 1903, vol. xiv, pp. 334-352; and subsequent publications in the same Journal.

It is the duty of those who are interested in cancer of the uterus thoroughly to study the subject and to determine by what means the growth can best be removed, and to impress on the medical profession and through them, the laity, that cancer of the uterus, if taken in time, can be cured in a large percentage of the cases, and that bleeding in some form is frequently but not always the earliest symptom of this condition. For this reason, a diagnosis should be insisted on not only in every case of uterine bleeding but in all cases with symptoms referable to any pelvic trouble. With the proper education of the medical profession and of the public, not only would the percentage of operable cases be increased, but as these would be diagnosed earlier the primary operative mortality would be less and the percentage of cures greater.

CARCINOMA OF THE FUNDUS OF THE UTERUS.

Carcinoma of the fundus of the uterus is less important than cancer of the cervix, because it is rarer, its duration is longer, and operative treatment is more satisfactory on account of the higher percentage of cures and lower primary mortality, for apparently only late in the disease does it extend beyond the uterus. The clinical diagnosis of cancer of the body of the uterus is more difficult and can only be made positively by the microscope. We have had 78 cases of cancer of the body of the uterus as compared with 412 cases of cancer of the cervix. Of these 78 cases, the clinical diagnosis was confirmed by the microscope in 67, and, on account of the difficulties of diagnosing this condition without the microscope, only the 67 cases will be considered. Only 11 of these 67 were inoperable, namely, 16 per cent. as compared with the 61 per cent. of the 417 cases of carcinoma of the cervix which were inoperable. One slight source of error exists and that is all the cases of inoperable cancer of the cervix were not curetted, and in a few of them the growth may have originated in the fundus and the cervix may have been involved secondarily. A comparative study of the two forms of cases is interesting.

In comparing the 56 operable cases of carcinoma of the fundus with the 162 operable cases of carcinoma of the cervix, we note that those afflicted with carcinoma of the fundus are older, over 67 per cent. of the cases being over fifty years old, as compared with about 30 per cent. of the other cases. The youngest patient with cancer of the fundus was thirty years old, while 6 of the 162 operable cases of cancer of the cervix were women less than thirty, the youngest being twenty-two years old. Forty-two per cent. of the patients with cancer of the body of the uterus had never been pregnant, as compared with only 3 per cent. of the operable cases of cancer of the cervix. The duration of the disease is longer in cancer of the fundus, as 67 per cent. of the cases had been bleeding for over a year before admission, as compared with only 21 per cent. of the operable cases of cancer of the cervix. In 10 of the 56 cases of cancer of the fundus there was a history of bleeding for over four years. In two of these 10 cases, the bleeding may have been due to a submucous myoma; in one case, however, the bleeding was of six years' duration and the cancer was the only condition found to account for it. On the other hand, in only three of the 162 cases of cancer of the cervix was there a history of bleeding for three years, and possibly in one of these three cases the bleeding had existed for over four years. The most interesting comparison of the two classes of cases occurs in the results of the operative treatment. The primary mortality in the operative treatment of the 56 cases of cancer of the body was 7 per cent. as compared with 16 per cent. for the 162 cases of cancer of the cervix operated on. Five years or more have elapsed since the operation in 24 cases of cancer of the body. Of this number, 2 patients died from the operation, we have been unable to hear from 6, the growth returned in 3, and 13 are living and apparently free from recurrence. Eighty-one per cent. of the 16 patients heard from as living, or, if we wish to count those not heard from as having died from recurrence, we realize that 13 of the 24 patients operated on are living and apparently cured, namely, 54 per cent. Of the 84 cases of cancer of the cervix, in which five years or longer have elapsed since the operation, 8 patients died from the operation, we have been unable to hear from 10, we know the growth returned in 50, and 16 are living and apparently free from recurrence; i. e., 24+ per cent. of the 66 patients heard from are living, or 19 per cent. of the 84 cases. We can readily see that on account of the slow growth of cancer of the body of the uterus, it is more frequently diagnosed before it becomes inoperable than cancer of the cervix, and because it remains restricted to the uterus for so long a time, the operative treatment is less severe and therefore the primary mortality is lower and the percentage of cures higher, for hysterectomy in a large percentage of cases removes the entire diseased condition. It is of the greatest importance to make a diagnosis in cancer of the fundus, because the operative treatment is attended with such a low primary mortality and such a favorable prognosis can usually be given.

The Usefulness of Drugs.—Many practitioners expect entirely too much from drugs and there are others who refuse to recognize the value accruing from the intelligent use of remedies tending to effect a modification of pathologic processes or the alleviation of symptoms. There should be more unanimity of opinion among physicians as to the usefulness of drugs. What is needed is a better knowledge of the natural cause of the different diseases. In all of the acute specific diseases, as pneumonia and typhoid, we have no drug which will shorten the process, and it seems worse than useless to continue the administration of remedies for any other purpose than palliation and the promotion of the patient's comfort. That patient will be saved much useless drugging whose physician has a clear conception of the pathology of the ailment and the limitations of his medicines.—*Ft. Wayne Med. Jour.-Mag.*

CESAREAN SECTION FOR PLACENTA PRÆVIA AN IMPROPER PROCEDURE.

THE STATISTICAL STUDY OF 25 REPORTED CASES WITH THE COMPARATIVE MORTALITIES OF 1,257 CASES OF CESAREAN SECTION AND 4,731 CASES OF PLACENTA PRÆVIA TREATED OBSTETRICALLY.*

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On account of the marvelous results obtained by asepsis and antisepsis, and by the safe administration of anesthetics, obstetrics is becoming an inviting field for surgical intervention. Indeed, operative obstetrics has so broadened in the past decade that now the care of parturient women is a distinct surgical specialty, and its wealth of literature vies with that of other specialties. In fact, in certain directions, it almost seems as if the *furor operativus* which swayed the ovariotomist one and two decades ago, has seized those who come in contact with pregnant and parturient women. Operations which are safe and expedient when performed for one type of indications are applied erroneously to complications of a very different sort; deductions made from one class of cases are fallaciously made to fit another without due consideration of the consequences. The application of the Cesarean section to placenta prævia comes within this category. It is folly to compare the results of Cesarean section for a contracted pelvis with those of placenta prævia; at most we may compare the orthodox methods of treating placenta prævia with the abdominal operation for the same indication.

No one can deny that Cesarean section is of signal value in conditions complicated by hemorrhage from placenta prævia, but this new impetus, started by general practitioners and surgeons, who candidly admit that they know little or nothing about obstetrics, will not receive the approval of obstetricians. I feel keenly that a word of warning should be given against the indiscriminate application of Cesarean section for placenta prævia, for most certainly American and Italian physicians, who alone are treating this obstetric complication by laparotomy, will regret their advocacy of the procedure when the reaction comes. Thus far Cesarean section for placenta prævia, *per se,* has not been performed by an obstetrician whose experience would permit him to speak authoritatively—with one exception, all the obstetricians who have used the procedure have operated in the face of dangerous complications which dictated the conduct of the case; *per contra*, the other operators, with the exception of one, possibly two, had no obstetric reason for their course.

THE MORTALITY OF CESAREAN SECTION.

Much has been written of the safety and simplicity of Cesarean section. For example,: "This is not a difficult operation," writes Dr. Andrews[1]; "The classic Cesarean section has as low a mortality as an easy ovariotomy," according to Boyd[2]; "Its (Cesarean section's) extremely low maternal mortality renders it again the preferable operation"—Reynolds.[3] In sharp contrast to the statements of those who minimize the dangers, Schauta's[4] opinion is worthy of a place in contradiction: "No one is justified in regarding Cesarean section as a simple operation, free from danger, or harmless in its after-effects." Also, Williams[5] decries the assertions of its simplicity.

TABLE I—CESAREAN SECTIONS.

Authority.	Total Cases. No.	Total Cases. Died.	Total Cases. Per Cent.	Conservative Operations. No.	Conservative Operations. Died.	Conservative Operations. Per Cent.	Porro Operations. No.	Porro Operations. Died.	Porro Operations. Per Cent.	Children. No.	Children. Died.	Children. Per Cent.
Ahlfeld[6]	13	4	30.7	11	4	36.	2	0	0	13	2	15.4
Braun[7]	74	6	8.3	34	4	11.8	40	2	5	74	6	8.1
Deny[8]	12	5	41.6	10	5	50.	2	0	0	12	4	30.7
Gummert[9]	11	0	0	9	0	0	2	0	0	11	1	9.
Leopold[10]	100	10	10.	71	7	9.8	29	3	10 3	100	8	8.
Strebel[11]	12	1	8.3	10	1	10.	2	0	0	12	1	8.3
Weber[12]	10	1	10.	...	...	...	...	...	...	10	2	20.
Zweifel[13]	76	1	1.3	...	...	...	...	...	...	76	0	0
Heidenhain[14]	4	0	0	...	...	...	...	...	...	4	0	0
Coe[15]	23	3	13.0	...	...	...	...	...	...	23	2	8.7
Harris[16]	21	2	9.5	...	...	...	...	...	...	21	0	0
Charles[17]	10	0	0	...	...	...	...	...	...	10	0	0
Bar[18]	10	1	10.	...	...	...	...	...	...	10	0	0
Cragin[19]	9	1	11.1	...	...	...	...	...	...	9	1	11.1
Truzzi[20]	16	2	12.5	...	...	...	...	...	...	16	3	18.7
Chrobak[21]	19	3	15.8	10	1	10.	9	2	22.2	...	...	...
Schauta[22]	67	8	11.9	58	6	10.34	9	2	22.2	...	...	...
Baumm[23]	10	2	20.	...	...	...	...	...	...	...	...	...
Everke[24]	37	12	32.	...	...	...	...	...	...	...	...	...
Hinschius[25]	30	2	6.7	...	...	...	...	...	...	...	...	...
Olshausen[26]	29	2	6.9	...	...	...	...	...	...	29	0	0
Reynolds[27]	23	0	0	...	...	...	...	...	...	...	...	...
Williams[28]	12	1	8.3	...	...	...	...	...	...	...	...	...
Cameron[29]	30	3	10.	...	...	...	...	...	...	...	...	...
Pasquali[30]	9	1	11.1	...	...	...	...	...	...	...	...	...
Huebl[31]	51	2	3.9	...	...	...	...	...	...	...	...	...
Hahn[32]	11	2	18.1	...	...	...	...	...	...	...	...	...
Frommel[33]—1893	76	13	17.1	44	5	11.3	32	8	25.	15	2	13.3
Frommel—1894	86	10	11.6	51	4	10.3	35	6	17.1	62	6	9.6
Frommel—1895	68	18	26.4	38	11	28 9	30	7	23.3	66	13	19.7
Frommel—1896	91	12	13.1	51	7	13.7	40	5	12.5	90	16	17.7
Frommel—1897	111	14	12.6	83	9	10.8	28	5	17 8	108	15	13.8
Frommel—1898	96	11	11.4	76	10	13.1	20	1	5.	98	11	11.2
Totals	1257	153	12.1	556	74	13.3	280	41	14.6	869	93	10.7
Ces. Sec. for Plac. Præv.	25	5	20.	20	5	25.	5	0	0	25	9 *16	36 64

*Seven died within 14 days.

My compilation of statistics proves indisputably that the claims made by Schauta and Williams are just ones. The collective maternal mortality for 1,257 (Table 1) conservative and Porro operations was 12.1 per cent.; the Saenger operation in 556 cases had a mortality of 13.3 per cent., while the Porro operation was performed 280 times with a mortality of 14.6 per cent. The collective fetal mortality in 869 cases was 10.7 per cent. Of course, most conservative sections were done in the interest of the child, while many Porro operations were made on behalf of the mother, with, perhaps, the presence of a dead child. Surely these figures are sufficient to prove that Cesarean section and its Porro modifications are serious operations, not to be lightly undertaken.

Operators are too prone to practice a process of exclusion in determining their mortality rates by eliminating the unfavorable cases which terminated in death; I am in perfect accord with those who desire to classify their Cesarean section operations, but the method generally in vogue of excluding certain fatal terminations can but vitiate their conclusions. The only logical course is to divide all cases into those operated on under favorable and those under unfavorable circumstances, and to estimate the several mortalities—this would remove all doubt at once. Including unfavorable cases which recovered with those treated under ideal conditions, or transferring deaths which properly come under the latter class to the former, only furnishes us with erroneous statistics. Surgeons generally classify their appendectomies into "interval" cases and cases with active peritoneal inflammation; to include the results of the former with the latter would be simply juggling with figures.

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* Read before the Chicago Gynecological Society.

In obtaining the data for the mortalities of Cesarean section. I have appropriated all clinical cases obtainable; it is presumed that the reports of large clinics, or of individual operators of considerable experience, are more favorable from the special experience acquired, than collective data from the literature—the data furnished by Frommel[33] tend to corroborate this statement. If reporters give a corrected mortality, I have given the full number of deaths, as the patients operated on under adverse conditions who recovered were included among the successful cases to swell the statistics. This explains why, in some instances, the deaths tabulated by me do not conform to the numbers usually quoted—examples being the results of Zweifel,[13] Leopold,[10] Schauta,[22] Chrobak,[21] Braun,[7] and Williams.[28] It is not here necessary to argue as to the difficulty or simplicity of the Cesarean operation, that depends largely on the skill and ability of the operator in carrying out surgical details, and the training of his assistants, but this much may be stated: this operation clearly is one with sharp lines drawn for its technic in uncomplicated cases. The most vital danger is in the liability of infection from the parturient canal, a danger which is not absolutely under the control of the operator even under the most favorable circumstances. Hernia is particularly liable to develop in the scar after a Cesarean section, probably from the length of the wound: Abel[34] had 8 of such postoperative accidents in 53 women. Again, adhesions may occur between the abdominal wall, uterine incision, intestine or omentum, which may have a very deleterious effect on the health of the patient, or which may be an item of great danger during the puerperium (Table 4, Case 21), or during a subsequent pregnancy.

THE MORTALITY OF PLACENTA PRÆVIA.

General Considerations.—The rule in all surgical hemorrhages is to arrest bleeding at once. In obstetric work, practitioners do not see the same necessity for stopping bleeding. If the slightest show of blood during pregnancy is recognized as being of serious import, much harm to women may often be prevented: hemorrhages in pregnancy never should be lightly considered. After a diagnosis of placenta prævia is made, much danger and many deaths could be prevented if the attendant would actively manage the case. It is an unwise procedure to attempt to carry a woman along with placenta prævia, unless she be in a hospital, or at least under the immediate care of a skilled attendant. Placenta prævia in nearly all instances should be held an indication for most energetic treatment—just as are all surgical hemorrhages. We should always consider that a woman afflicted with this complication of pregnancy is in grave danger until the child and secundines are delivered. If Tait's[35] estimate of the mortality of 50 per cent. in placenta prævia in general practice is correct, then the mortality is not due to the want of a proper procedure, but to procrastination, to half-hearted methods of treatment, to slovenly and careless application of asepsis, to the absence of adequate skilled assistants, and, finally, to a lack of a full armamentarium to combat the complications present. No surgeon would undertake to perform a dangerous operation without sufficient preparation and trained assistants, but the rule still is for physicians unassisted to hazard major obstetric operation in the face of most portentious complications, or with untrained help—a custom which should be condemned. As obstetric cases are so often emergency ones, we must condone the necessity, but congratulate the country practitioner who unaided successfully carries a parturient woman through the stress of a difficult delivery; but such a thing is inexcusable in a city with assistants within easy call. I have in mind a young woman in a wealthy family in Chicago, the birth of whose first-born was expected. When about seven months of the pregnancy had elapsed a severe hemorrhage occurred; in consultation it was agreed that placenta prævia centralis existed; it was further agreed that the woman should be tided over a period in hopes of giving the child a better chance. Suddenly an alarming hemorrhage occurred; the physician, with no definite plans laid for this likely contingency, rushed to the house, turned and delivered an asphyxiated child. While he and the nurse were enthusiastically laboring over the baby, entirely ignoring the mother, the patient died of post-partum hemorrhage. Such care of parturient women accounts for many deaths in placenta prævia.

The custom of reporting a series of cases of placenta prævia without clearly summarizing the data of the various types of placental presentations offers inexact information; it is indispensable that the cases should be classified as lateral, marginal, partial, and complete placenta prævias. Without such classification we are presented with a jumble of facts which can not be of much clinical or scientific value. Lateral implantations of the placenta in the presence of a normal vertex or of a breech presentation, ordinarily require no further treatment than the timely artificial rupture of the membranes—rarely need such cases terminate fatally. Central implantations, or cases in which there is an abnormal presentation, demand energetic treatment; between the extremes, the procedure elected depends on local conditions. The too common mistake is to consider that there is one method of treatment which will fit all cases. It is not the time or place to enter on the treatment of such hemorrhages, but the brilliant results of Behm,[36] Blacker,[37] Stratz,[38] Fry,[39] Hirst,[49] Drejer,[41] Koblanck,[42] Welti-Pinard,[43] Murphy,[44] De Lee,[45] Amadi et Ferri[46] (Table 3), offer encouraging results for obstetricians, and eliminate the need of more drastic and fatal measures. In 1,029 cases treated by the above the mortality was 3.3 per cent. These results were obtained generally by Hicks' version, metreurysis, and rupture of the membranes.

In compiling my statistics I availed myself of the exhaustive investigations of Read,[47] who collected 1,024 cases of placenta prævia recorded from the time of Portal, in 1672, to 1861, his information, largely, almost exclusively, being that found in the English and French literature. As his tables and deductions have not received proper recognition, and have never been collectively tabulated, even by Read himself, I have deemed it of value to give a mortality résumé of his tables.

Indeed, I have computed practically all the figures credited to Read in this paper from a study of the reports compiled by him. Müller's[48] statistics have been very popular and need no introduction. The results shown by Read and Müller are widely divergent from the statement of Tait[35] that the mortality of placenta prævia is near 50 per cent. He based his opinion entirely on his own mortality, which reached that appalling figure. The combined death rates of Read and Müller (Table 2) for 1,975 cases of all kinds, 692 complete prævias and 618 incomplete prævias, were 23.6, 30.9 and 15.0 per cent., respectively. It must be fully cent. The combination of imperfect retraction of the lower segment and placental adhesions would seriously compromise the technic of Cesarean section, which, with the concomitant anemia, would directly jeopardize the life of the woman. These factors alone substantiate Schauta's statement that "to replace version by Cesarean section in such cases (placenta prævia) would add another greater danger to that already existing." The uterovaginal tamponade has been recommended as an active remedial agent, or as a routine prophylactic measure in the after-treatment of placenta prævia by Duhrssen[72] and others. I believe thoroughly in this postpartum uterovaginal tamponade, and use it as a routine in placenta prævia. Vicarelli[73] has recommended this tamponade after Cesarean operations, and has used it in 7 cases. Bernays[74] and Swift (Table 4, Cases 4 and 26) used small pieces of gauze for the same purpose, but the amount used could not be denominated uterovaginal tamponade, as they were in Vicarelli's cases. We feel that uterovaginal tamponade in Cesarean section may be dangerous by exciting too active uterine contractions, thereby jeopardizing the sutures, and yet may be ineffectual from the inability of the operator to pack tightly the point most needed, the placental site.

3. *Absence of Facilities for a Laparotomy.*—The observance of minute surgical details determines the success of all surgical work; if one fact has been definitely, absolutely, proven it is that the best results in surgery can only be obtained in a well-equipped operating room with skilled assistants. Obstetrics is a surgical specialty, and Cesarean section is an abdominal operation which demands skilled assistants with most scrupulous regard to an aseptic technic. Great as are the risks of puerperal infection in placenta prævia, opening the abdomen offers immeasurably greater dangers with untrained help and hurried, inadequate preparation. In this connection may be mentioned the qualifications of the operator, as laid down by two surgical advocates of the Cesarean operation for placenta prævia. Bernays[74] wrote in 1882: "I would recommend Cesarean section if a man had performed or assisted at 200 abdominal operations and the mortality was below 7.5 per cent. as a substitute to Hicks' version, or the alternative measure—if a surgeon is not at hand—do version."

Donoghue,[75] entering the domain of obstetrics, proclaimed this in 1900: "For the successful performance of version an obstetrician having the necessary experience (the performance of at least 50 versions, for instance, being considered sufficient experience) is not so readily obtainable," and then continues with a rhapsody on Cesarean section for placenta prævia with obstetric considerations omitted. As there are exceedingly few available men with surgical proclivities who have performed 200 laparotomies, and still fewer practitioners, yes obstetricians, who have had opportunities of performing 50 versions, we are constrained to believe our surgical friends would have nearly all women afflicted with placenta prævia buffet the ebbing waves of their own life-blood stream between Scylla and Charybdis, awaiting the 50-case versionist, or the 200-case laparotomist.

4. *Rarely Can the Operation Be a Primary Procedure.*—Rigidity of the soft parts, cervical rigidity especially, is the indication most frequently suggested by surgeons. The consistency of a particular cervix is generally only determinable by attempts to secure dilatation of the os. Again, during the protracted period of preparation, hemorrhages may continue, necessitating vaginal tamponade. Attempts at dilatation, or measures instituted to allay bleeding, or efforts to deliver, at once make the Cesarean section a secondary operation. Obstetricians are almost a unit in agreeing that after vaginal procedures have been employed, the safe time for a Cesarean section is gone.

5. *Infection.*—At term the vagina normally is free from active pathogenic germs, but under circumstances not always under control, or in conditions as yet not fully recognized, a bacterial flora of marked virulency may develop. Undoubtedly, the presence of blood clots, or of active bleeding, by alkalinizing the vaginal secretions, will offer a habitat for the development of the micro-organisms usually present, or introduced by unclean hands, and dirty instruments. A puerperal infection whose atrium is the placental site is peculiarly dangerous to the parturient woman on account of its intimate relation to the veins and lymphatics. The almost direct communication of the veins and lymphatic of the lower uterine segment and of the cervix with their allied structures in the parametrium makes an infection introduced in these uterine divisions particularly liable to dissemination. These anatomic considerations go a long way toward explaining the great frequency of postpartum infections in placenta prævia. The clinical picture is completed by unclean fingers and unsterilized instruments coming in contact with the placental site during a protracted operative delivery; during the lying-in period the ascent of infective lochia may offer additional liability of an infection. We also must remember that, even when no examinations are made in spontaneous births, an infection of the puerperium may follow. Kroemer[76] has shown us that such an accident occurs in from 10 to 11 per cent. of such labors. While such an infection is rarely serious after physiologic labors, it may be the explanation of many lethal inflammations following Cesarean section. Truesdale's[77] statement, "Cesarean section should be done before anything else has been tried or not at all," owes its force to these various considerations. In general, the best results in Cesarean section may only be obtained by a rigorous regard to Schauta's rule that the operation should be done when sufficient time has elapsed from the diagnostic examination to preclude contamination from the vagina.

ANALYSIS OF REPORTED CASES.

"It must be acknowledged, however, that all errors of practice do not proceed from ignorance of the art. Some of them may justly be imputed to our entertaining too high an opinion of the art, or of its application in practice, when it is not absolutely required, and when its application is prejudicial, and to too much confidence in our own dexterity"—Denman,[78] 1805. This explains why Lawson Tait[35] hazarded the treatment of placenta prævia by hysterectomy—he was an expert abdominal surgeon, an authority on gynecology, but he had entirely neglected practice in obstetrics. To quote him: "I have all my life avoided in every possible way contact with obstetric practice, and for thirty years have had no personal association with it save in occasional consultations." What was more to be expected than that he should have had a fearful mortality in placenta prævia, a grave surgical disease in a branch of medicine in which he had developed no operative technic, and that he should employ an abdominal operation in an attempt to lower his mortality, which was treble, even quintuple, the death rate of obstetricians of his own time? I believe Deaver[30] has done himself the greatest injustice, and set an example which should not be followed, when he performed his Cesarean section for placenta prævia, as he was less familiar with version. Surely this is on a par with a practitioner who amputates a leg because he does not know how to treat a fracture.

TABLE IV—CESAREAN SECTION FOR PLACENTA PRÆVIA.

	Operator.	Age.	Para	Mos. Preg	Preliminary Treatment.	Type of Operation	Result Mother.	Result Child.	Contributory Indications—Remarks.	Degree of Plac. Prævia
1	Sligh[82].	32	5	7	Tamponed for day or more; hydrostatic dilators; ruptured membranes.	Conservative.	Died.	Died in 2-3 days	Cervix hard and short; possibly a carcinoma of cervix (?)	To back and left—Partial.
2	Lodemann[83]	39	5	8	Tampon	Conservative with ovariotomy.	Lived.	Died.	Absolute indication for Cesarean section: osteomalacic pelvis.	Partial.
3	Hypes & Hulbert[84]			7-9	Data refused	Conservative.	Died	Died.	Performed as a last resort	
4	Bernays[74]	42	4	8	Tamponed for 12 hours	Conservative.	Lived.	Died in 10 hours.	Os admitted finger; rigid os, but after delivery of child, os found easily dilatable.	Complete.
5	Pasquali[85]			6		Conservative.	Lived.	Not Viable.	Contracted pelvis	
6	Pasquali .			6		Conservative.	Lived.	Not Viable.	Contracted pelvis.	
7	Morris[80]	34		5	Planned to dilate os rapidly, but *feared to do it as consultant saw* two deaths from such plan	Porro.	Lived.	Not Viable	Hysterectomy done for a five month miscarriage; not appropriate case	High lateral.
8	Bossi[86]			7-9		Conservative.	Lived.	Died.	Rupture of uterus	
9	Braun[7] (case 47)	37	1	7	Cervix tamponed for 32 hours; colpeurynter for day and half.	Porro.	Lived	Died in 3 days.	Rigid os; severe atony; other treatments of no avail—last resort; myoma of uterus	
10	Braun (case 58)	38	4	7-9		Porro.	Lived.	Died in 2 days.	Rigid os; endometritis with chills, high fever; tympani uteri	
11	Mattoli[67]	28	2	7-9	Tampon used—*of no avail; did section* as he did not have colpeurynter	*Conservative*	*Lived.*	*Dead.*	*Os admitted finger tip; in absence of* dilators did Cesarean section.	*Complete.*
12	Tait[35] .		4	Near term	Ruptured membranes; and many other orthodox methods of treatment used.	Porro.	Lived.	Died in a month.	Os rigid, admitting one finger: did hysterectomy on account of his previous high mortality.	Not complete.
13	Donoghue[75].	40	2	7-9	Tampon and temporized	Conservative.	Lived	Lived.	Os extremely rigid, admitting two fingers—dollar size.	Complete
14	McCalla[88]	37	Mult	7-9	Operated after hemorrhage stopped spontaneously.	Porro.	Lived	Died in a week.	Os soft, patulous. Operated when hemorrhage stopped spontaneously.	Complete.
15	Covington[89]	29	4	9	No vaginal treatment	Conservative.	Lived	Lived	Three bad labors	Complete.
16	Gillette[90]	40	5	Near term.	Tampons, tried to dilate forcibly—severe hemorrhage, so desisted	Porro	Died.	Lived.	Os size of ten cent piece; procrastination for month, bed and room looked like a slaughter house.	Central
17	Hare[91].	37	3	8	Refused treatment for 28 days, tampon.	Conservative.	Died.	Died in 13 days.	Os dilating; lost "quarts of blood.'	Partial.
18	Lanphear[81]	34	1	4	Attempts to dilate rapidly produced alarming hemorrhages	Porro.	Lived.	Not Viable	Undilated os, profuse stinking discharge; slightest attempts to dilate caused hemorrhages. Merely a neglected miscarriage	?
19	Webster[92]	13	1	8	Tampon until Cesarean section could be done	Conservative	Lived.	Dead	Justo-minor pelvis, rigid undeveloped soft parts—a child mother.	Lateral
20	Conroy[93]	35	5	7 9	Tamponed twice in brief peroid	Conservative.	Lived.	Dead.	Os admitted finger tip	Partial.
21	Donoghue[94]	40		7-9	Text implied that there was no preliminary treatment.	Conservative	Died	Alive.	Patient died from "stoppage of intestines"—adhesions of omentum to uterine and abnormal wounds	Complete.
22	Hopkinson[95]. .	29	3	9	No treatment, hemorrhage appeared while waiting for an elective Cesarean on account of contracted pelvis	Conservative.	Lived.	Lived.	Contracted pelvis—two difficult craniotomies, an elective Cesarean for contracted pelvis.	Marginal
23	Omboni[96] .			7-9		Conservative.	Lived.	Living when extracted		
24	Truesdale[..].	33	7	8	Tampon for four hours, treatment considered Rapid dilatation, version or Cesarean section.	Conservative	Lived	Died in ½ hour.	Os resistant, not rigid, admitting two fingers, gravity recognized af*ter two and one half* months of treatment	Partial (?)
25	Willard[97].	40	1	5	No treatment locally as placenta prævia only discovered in laboratory after hysterectomy done	Porro	Lived.	Not Viable	Woman 18 inches tall—weighed 39 pounds, 54 fractures, marked compression of lungs and heart.	Marginal.
26	Swift[103]	34	1	Near term	None mentioned although bleeding had continued for 10 hours	Conservative	Lived.	Lived.	Cervix partially effaced, os admitted one finger, tampon placed in uterus postpartum	Partial (?)
27	Deaver[79] .	41	6	8	Tampon for 36 hours .	Conservative	Lived.	Lived.	Os half dollar size, Cesarean section done as operator was more familiar with it than version	Complete
28	Fry[98]	31	1	5-6	Tamponed twice for hemorrhage, consultants agreed on Cesarean	Conservative	Lived.	Not Viable.	Small vagina, no cervical effacement; os closed, strong labor pains.	Complete (?)
29	Zamboni[99]				Data not obtainable					

In the same way, it is not in accord with good obstetrics for Drs. Robert T. Morris[80] and Lanphear[81] (Table 4, Nos. 7 and 18) to perform hysterectomies for miscarriages at the fourth and fifth months, even though there were hemorrhages present from placenta prævia (?). It is to be expected that severe hemorrhages will occur when rapid dilatation, instrumental or manual, is employed in instances of placenta prævia. Abdominal hysterectomies are perhaps reasonably safe procedures, but we can not see their utility when the simple tampon, possibly a metreurysis, will arrest bleeding and secure sufficient dilatation for the exit of a small collapsible fetus and a diminutive placenta.

Fry's[98] case is incompletely reported in a footnote; to the uninitiated his patient appears to have presented features analogous to those of *Morris and Lanphear*, but we know that Fry's experience with placenta prævia is a wide one; yet we wonder if the continued use of the tampon, later supplemented by the rubber bag, would not have produced the desired result without recourse to the knife, as the hemorrhage was stopped by the tampon, and pains were increasing. Willard's[97] patient (Table 4, No. 25) can not be considered to have had placenta prævia, clinically at least, for there was no bleeding; hysterectomy was done for an exceedingly rare condition; a woman 18 inches tall (buttocks to cranial vault), weighing 39 pounds, with such extreme deformity that even at the fifth month her life was despaired of on account of excessive pneumonic compression; on opening the hardened uterus some weeks after the operation a placenta prævia marginata was found. H. R. Storer's case has been included in previous studies; it was omitted in the table as it was a postmortem Cesarean section—twins were delivered, one was dead, the other deeply asphyxiated, but could not be resuscitated.

These facts were furnished by Dr. Storer himself in a personal communication. I would say *en passant* that Dr. Storer was the first to perform a hysterectomy in pregnancy or labor, ten years before Porro used the same procedure, although Blundell[100] had suggested the technic of the Storer-Porro method years before and had successfully carried out the operation on rabbits. In making up my data I have omitted the cases of Morris, Lanphear and Willard for reasons already specified; as the mothers all recovered, the omission raises the maternal mortality in certain deductions, and, as all the fetuses were non-viable, the fetal mortality is lowered proportionally. Hopkinson's report deserves special mention, for the Cesarean section was determined on on account of a contracted pelvis. The patient was permitted to go into labor—while awaiting the knife, bleeding began. If she had not the pelvic deformity, most certainly she would have been treated obstetrically.

For the purpose, therefore, of obtaining data I have used 25 cases—5 women died, 20 per cent. Of the children, 9 were born dead, 36 per cent. Of the 16 babies delivered alive, 7 died within the puerperal period of 2 weeks, making 16 deaths, 64 per cent. We find the direct fetal mortality has been reduced approximately 35 per cent., but, in obtaining this result, the maternal deaths have been raised threefold. The brilliancy of these results is manifested if we make tables, on a basis of 100 cases, of the mortalities according to the new treatment and the orthodox plans.

CESAREAN SECTION.	
100 mothers, 20 dead	20 per cent.
100 babies, 36 dead	36 per cent.
OBSTETRIC PROCEDURES.	
100 mothers, 7 dead	7 per cent.
100 babies, 55 dead	55 per cent.

Brilliant results, indeed! Cesarean section saves 19 babies, but kills 13 mothers. Further, when we consider the deaths of the 7 weaklings, we find that 12 babies are saved at an expense of 13 mothers. This is but a corroboration of Schroeder's[101] opinion: "We are convinced that those who would aim at the most happy results in the treatment of placenta prævia take the least possible consideration of the child."

Type of the Prævia.—In 7 cases no information is given, or it is so vaguely expressed that it is not justifiable to consider them; 2 died, one from rupture of the uterus, which was the direct indication for the operation, 28.5 per cent. There were 9 complete prævias, with 1 death, 11.1 per cent. maternal mortality. Of the children, 2 died, 22.2 per cent.; 2 died later, one in 10 hours, the other in a week—an ultimate mortality of 44.4 per cent. There were 9 incomplete prævias, with 2 deaths, 22.2 per cent. Of the 9 babies, 3 were born dead, 33.3 per cent.; of the 6 infants born alive, one died in a half-hour, the second in 2-3 days, the third in 13 days, and the fourth in a month, leaving 2 alive—an ultimate mortality of 66.6 per cent.

Period of Pregnancy.—There were 5 cases in the sixth and seventh months of gestation—one died, 20 per cent. None of the children lived. The remainder, 20 operations, were on women with viable children—of these women 4 succumbed, 20 per cent. Operations were performed on 6 women at the eighth month, 5 at the ninth month or near term, and 9 between seven and nine months (exact data not being given). Of the 16 cases with definite statements as to the period of pregnancy, only 5 were at term, 31.2 per cent.; this percentage closely agrees with Read's report that 34 per cent. of pregnancies complicated by a placenta prævia each term.

Type of Operation.—Conservative Cesarean sections were performed 20 times, with a maternal mortality of 25 per cent.; 7 babies lived, 9 (45 per cent.) were born dead, and 4 died within 13 days—an ultimate mortality of 65 per cent. There was not a maternal fatality among the 5 Porro operations. All the children were born alive, but only 1 lived; 1 died on the second day, 1 on the third, 1 on the seventh day, and the last at the end of the month—an ultimate fetal mortality of 80 per cent.

Status of the Operators.—It is of interest to study the professional positions of the various operators, and with special relation to the indications for the sections. Here, perhaps, it is expedient to use all the reports (29) tabulated by me without omissions. The status of the various American operators was obtained from Polk's Directory, and the headings of their respective papers: the European men, by reputation. We find that 9 obstetricians operated on 11 women, 5 surgeons on 6 women, 5 general practitioners and 4 gynecologists had 1 case each: their mortalities were, respectively, 18.1, 16.8, 20.6 and 25 per cent. The branch of medicine to which 3 reporters largely devoted themselves was not ascertainable.

The Indications.—The obstetricians resorted to the operation five times for contracted pelvis, once for rupture of the uterus, twice for rigid os associated with severe atony, tympani uteri and infection, once for a small vagina, once as a last resort (this being the third case mentioned in the literature), and the last for an uncomplicated placenta prævia.

The other operators had 18 cases. There were 6 cases of "rigid os," but in one instance, strangely enough, the os was found to have dilated passively as soon as the child was delivered; and in a second the operator was influenced by his previous high mortality: one patient had had "three bad labors": miscarriage was the indication twice: a rachitic dwarf with fragilitas ossium required an operation: the surgeon in one case did not know the technic of version: and, finally, 7 did not furnish data showing contributory indications, if there were such. One surgeon (Donoghue) makes the startling announcement that a transverse presentation and a prolapse cord are indications for Cesarean *section, and contraindications for an obstetric version*: as the child must be turned in order to remove it after a uterine incision has been made, we imagine he would have to perform a procedure which he believes contraindicated. Obstetricians have always held, and will continue to believe, that version is the operation of election in transverse presentations and funic prolapses: that these conditions are present in placenta prævia only more strongly demands the turning.

Finally, these cases tabulated by me show conclusively that Cesarean section generally can not be a primary procedure. The tampon was used on 10 patients.

various expedients were tried on 4, no treatment was mentioned in 5, and the remainder may be considered uncertain as to whether or no attempts were made to deliver per vaginam. In certain instances of rigid os nothing is said as to preliminary treatment, but the mere fact that the os was characterized as rigid strongly implies that attempts to dilate were made.

In conclusion, I have not found one obstetrician whose word may be authoritative who recommends the procedure. Surgeons, general practitioners and gynecologists who presumably rarely see physiologic and pathologic parturient women, advise it. A physician must have a close, intimate, working knowledge of normal labor to appreciate the refinements of pathologic obstetrics. J. W. Williams,[5] E. B. Cragin, P. A. Harris, C. Jewett, E. P. Davis and E. H. Grandin, all obstetricians, condemn the operation for the indication under consideration, reserving it for severe complications. J. C. Webster (personal communication), whose case (No. 19, Table 4) is included in my report, considers it an unscientific procedure—only to be done under great necessity, as a contracted pelvis. Schauta[4] denies its necessity, and all European obstetricians condemn it by refusing to perform Cesarean sections for placenta prævia.

CONCLUSIONS.

1. Cesarean section for placenta prævia lowers the fetal mortality 30 per cent. and raises the maternal death rate nearly threefold. Approximately the life of one mother is taken to save the uncertain existence of one baby.

2. Table 4 shows that the maternal mortality for incomplete prævia is twice that for the complete variety, which is an absurdity, and is due to the few cases reported.

3. Unquestionably some maternal deaths have been suppressed, as in Cesarean sections for pelvic indications.

4. A rigid os is one of the rarest complications of placenta prævia. Undoubtedly most cases of so-called rigid os are simply instances of cervices unprepared for dilatation, or a misconception based on too brusque and rapid attempts to dilate or to extract. A true cicatricial cervix, and rigid cervices of old primiparæ, may offer an indication for Cesarean section in placenta prævia.

5. Pelvic contractions are indications for Cesarean section in the presence of a prævial hemorrhage; the pelvic contraction, not the prævia, is the determining indication. The earlier the interruption of gestation, *caeteris paribus*, the more may pelvic deformity be disregarded.

6. In general, the presence of a placenta prævia will not be recognized before hemorrhages appear.

7. Cesarean section for placenta prævia never will have so low a maternal mortality as when performed for a pelvic indication. Repeated examinations by the physician and his consultants must be made for diagnostic purposes; often a vaginal tampon must be introduced as a temporizing measure, at least until the woman may be transported to a hospital or preparations made at home for the laparotomy. The acute anemia and finally the anatomic conditions postpartum all render the operation a peculiarly dangerous one.

8. Placenta prævia cases appropriate for Cesarean section generally will demand the procedure irrespective of the fetal condition, as the primal motive should be to save the mother.

9. Cesarean section for placenta prævia should only be considered a *dernier ressort*.

10. If an abdominal operation is forced on the obstetrician, he should remove the uterus as a prophylactic against hemorrhage and infection.

11. The profession should await the adjudication of the field for Cesarean section in placenta prævia by obstetric authorities before resorting to the operation.

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THE UNIVERSAL METHOD OF CLINICAL WRITING BY MEANS OF CLINOGRAPHY.

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All the medical world feels the necessity of gathering together the clinical histories of the patients in a uniform method, so as to render them easily understood by all, and thus utilize them for increasing medical knowledge.

The method which I published a year ago, and which now is known and practiced in the principal centers of Italy, in the hospitals and the ambulances, has been proved by me for many years in the largest number of cases which I have observed in private practice and in the hospitals.

I have given the name of "clinography" or "universal method of clinical writing" to my system. It has two objects. The first object is to express the narration of the facts by means of a history in the Latin language, composed of three separate parts:

I. *Notæ Subjecti.*—The qualities of the subject, namely, age, sex, profession, heredity, habits, etc.

II. *Historia Subjecti.*—History of the preceding maladies.

III. *Historia Morbi.*—History of the present disease.

The second object consists in presenting a diagram, that is, a figure representing the parts of the patient, which are examined by means of physical examination, percussion, palpation, etc., and showing the results of these examinations. Therefore, the diagram is made by means of topograms, showing the examined parts, and semiograms, which represent the various symptoms which have been found by the physical examination.

The object of this article is to present some diagrams of disease, and thus to explain a great part of the system.

LEFT-SIDED EXUDATIVE PLEURISY.

The part examined was the posterior surface of the thorax. The two vertical parallels (Fig. 1) represent the vertebral column from the seventh cervical vertebra, represented by the small upper arch, to the limit between the eleventh and twelfth thoracic vertebræ or the lower edge of the lungs. This limit on the right side is indicated by the dotted line (abandoned line) because the lower margin of the right lung is lower by one centimeter, as is shown by the cifra above the dotted line, terminating in two small angles (the line of distance). The letters *a. p.* (axillary line, posterior) indicate that the topogram, and, therefore, the part examined, extends to these lines (it is a rule that the extent of the topogram corresponds exactly to the extent of the part examined).

The posterior surface of the left lung is divided into two parts by a line composed of strokes and dots. This serves to limit all the examined surface, when the limits are not made by topographical lines (artificial limiting line). If, instead of this line, there was a continued line, this would represent, in the figure in question, the cleft between the lobes.

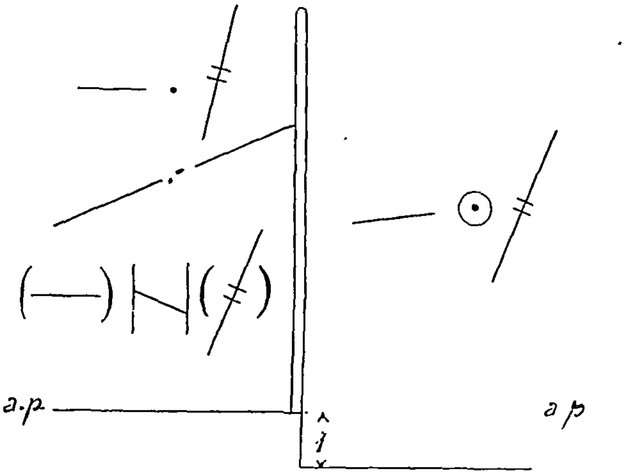

Figure 1.

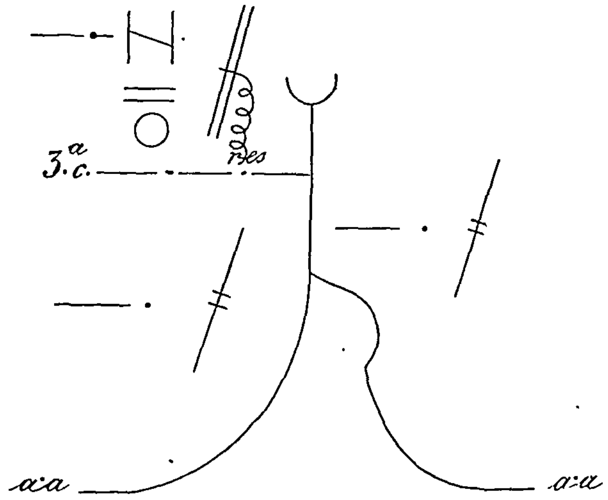

Figure. 2.

The symptoms observed by the physical examination in this case were as follows:

In the upper part of the posterior surface of the left lung there are three signs which indicate, respectively, normal vocal fremitus, normal pulmonary sound by percussion, normal inspiration and expiration, inspiration being represented by the lower part of the line, expiration by the upper. In the lower part of this same surface there are two signs already explained above; but they are in parenthesis. That is to say, the two symptoms are absent, namely, vocal fremitus and auscultated respiration are not to be found. On the contrary, in the place of the pulmonary sound there is a sign composed of two little vertical lines, with an oblique line between them, signifying a dull sound. In order to aid the memory, the oblique line represents the suppression of air from the part enclosed by the two vertical lines—the physical condition in which occurs the dull percussion sound.

In the posterior surface of the right lung there are the semiograms, already explained, but the pulmonary percussion sound is closed within a circle, which represents the tympanitic percussion sound, and this signifies that in this region the pulmonary sound has a tendency to the tympanitic sound. The small circle reminds one of an air-ball, that is, the physical condition in which occurs the tympanitic percussion sound.

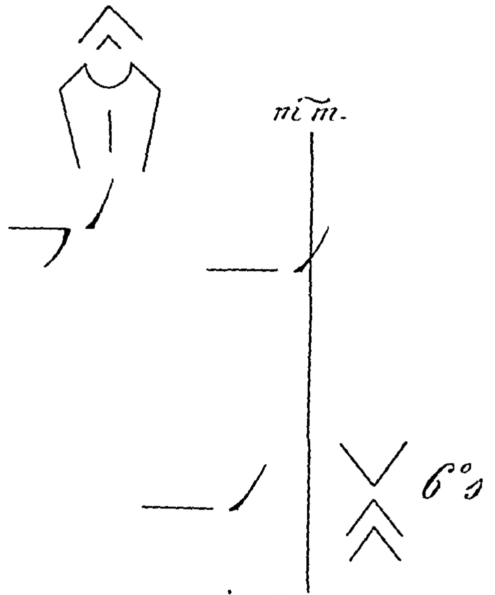

Figure 3.

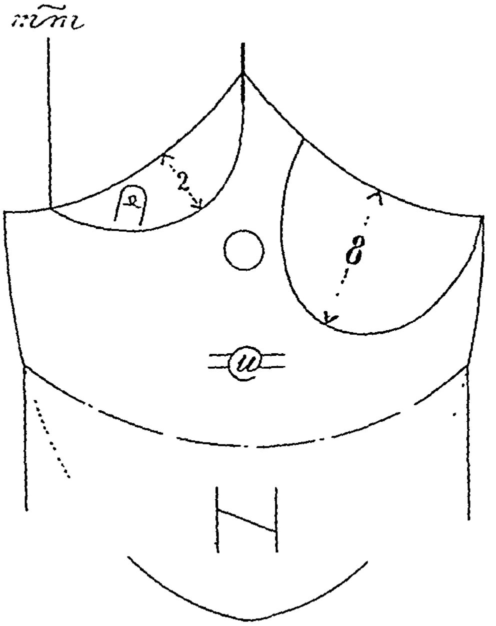

Figure 4

CAVERNOUS TUBERCULOSIS OF THE APEX OF THE RIGHT LUNG.

The topogram of Figure 2 is composed of a small arch (jugulum or upper margin of the sternum), from which departs a figure like an *h*, which represents the anterior margins of the right and left lungs. The letters *a. a.* form the limits of the topogram, and indicate that the examination of the patient was made only on the anterior surface of the thorax (*a. a.* signifies anterior axillary line).

In the surface of the left lung, and in the lower part of the right, there are three semiograms which we already know (Fig. 1). The upper part of the anterior surface of the right lung is separated from the lower by means of an artificial limiting line, which corresponds to the third rib. In this part the vocal fremitus carries a sign formed of a dot from which, on the right, goes off a small line. This sign indicates the great intensity of the fremitus, while a dot with a small line on the left indicates weakness, a dot with a small line above or below indicates, respectively, the certainty or uncertainty of a phenomenon. By these four representations it is easy to aid the memory.

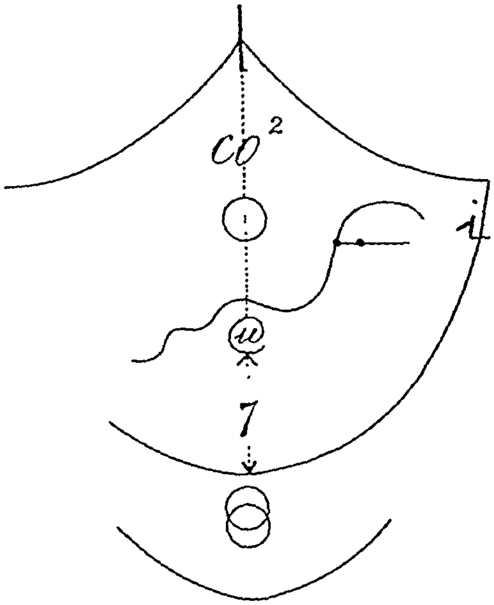

Figure 5.

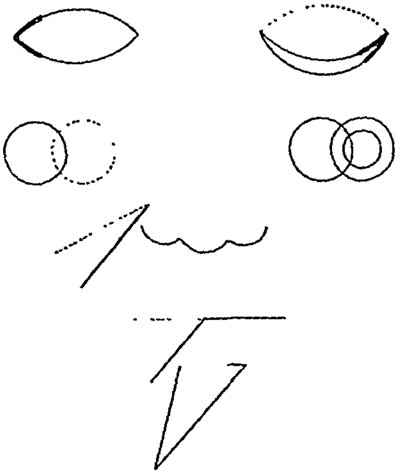

Figure 6

The semiograms of the dull and tympanitic percussion sound are separated by two small horizontal lines, and this indicates that the gentle percussion produces the dull sound, and the strong produces the tympanitic sound.

The semiogram of the auscultated respiration (also Fig. 1) is here doubled, to indicate a soft bronchial respiration in both the acts.

In the first of these acts there is a figure representing a series of small circles. They remind one of bubbles of the mucous râles, and, therefore, one must read that in the inspiration there were some mucous râles (small sized). Finally, "res" indicates that these râles are resonant.

DILATATION OF THE ASCENDING AORTA FROM ATHEROMA, WITH HYPERTROPHY OF THE HEART.

The small jugular circle (also Fig. 2) reminds one that the examination has been made on the anterior surface of the chest; but here (Fig. 3) is represented the entire manubrium. On the left one sees the mammillary line (*mm*). On the manubrium is the semiogram of the reduced percussion sound. Above it is a sign which represents a strong pulsating area. (If the pulsation were of middle strength, instead of the double angle there would be a single one.)

The semiogram of a *V* indicates the apex of the heart, and this diagram signifies that this apex pulsates strongly and outside of the mammillary line, and in the ixth intercostal space.

In the three points of auscultation of the heart, there are two signs which represent the two normal sounds of the heart, separated by the short pause. The space which reunites the upper extremity of the second sound with the beginning of the first represents the long pause. This space completes an imaginary circle, which represents the cardiac revolution, with the well-known succession of the first sound of the heart, the short pause, the second sound, and finally the long pause. In our diagram, in place of the pulmonary valve auscultation, and also in the apex of the heart, the two sounds were found normal, and in the place of the aortic valve auscultation the first and second sounds are replaced by a murmur, and, therefore, the signs of the sounds are terminated by a hook.

COMMON HEPATIC CIRRHOSIS.

The topogram (Fig. 4) is formed by two arches, which remind one of the lower outline of the chest, and between these there is a small vertical line which reminds one of the apex of the sternum. The remaining part of the topogram is formed by an oval which, together with the two arches, forms the topogram of the anterior face of the abdomen. In the center of this there is an encircled *u*, which indicates the umbilicus. The two small horizontal lines on both sides of the umbilicus signify that it has lost its concavity and has become flat. To indicate that the sides of the abdomen are enlarged (ascites), a part of the abdominal ovoid is dotted; in place of this abandoned line (Fig. 1) we have near it *a continued vertical line*.

By the palpation is found a tumor of the spleen whose maximum measure is 8 cm. The liver is represented by a small zone, between the mammillary and median lines. The figure of a finger on the liver indicates that it is resistant to palpation, and the figure like an *e* on this finger indicates nodular resistance. The other semiograms are already explained above.

HYPERTROPHY AND DILATATION OF THE STOMACH WITH STENOSIS OF THE PYLORUS.

The topogram of Diagram 5 is the same as the preceding one. By means of inflation with carbonic acid (CO_2) we have very strong peristaltic movements, and the figure of the stomach is visible (*i*) and palpable, with an outline, which crosses the median line at 7 cm. below the umbilicus. The tympanitic sound of the surface is different from that of the inferior part because this latter is higher.

PARALYSIS OF RIGHT FACIAL NERVE, SUPERIOR AND INFERIOR BRANCHES, WITH PARALYSIS OF HYPOGLOSSAL NERVE, ETC.

Diagram 6 represents many different nervous symptoms, from the examination of the face. On the top there are the two apertures of the eyelids. The outlines of these apertures correspond exactly to the margins of the eyelids. To the right the exterior angle of this aperture shows a thicker line *to signify that it* is impossible to close it (a pose or forced position). On the left side the forced position is put on a closed eye. This closed eye is indicated by the abandoned line (lagophthalmus, ptosis). A similar abandoned line is used to express that the line of the cheek and the half of the mouth are lowered on the right side. The tongue is drawn under the mouth by means of an angle, whose left side is longer and curved, to indicate that there is a deviation of this organ toward the right side. Finally, there exists in the diagram two crossed circles, both on the right and left. They indicate the *reflexed movement of the iris, by light and by adaptation to distance*. In the right eye the first is normal, the second absent; in the left eye the first is normal, the second is weak (double-lined circle).

TUBERCULAR MENINGITIS.

REPORT OF THREE CASES.*

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To the physician who sees much of disease in children, tubercular meningitis is a specter that forever haunts the scene. Sometimes we fail to observe it as it lurks in the shadow, not yet ready to declare itself openly; more often, perhaps, we imagine we see it hovering over our patient, when subsequent developments prove we were deluded. How to recognize this evil spirit, so that we may know from the beginning with what we are contending, is a problem worthy of our utmost effort; and it is to this that I wish to direct your attention. During 1904 I saw three cases of tubercular meningitis, an account of which will serve to emphasize the difficulties in the way of making a diagnosis and the steps to be taken to overcome them.

Case 1.—A boy, aged 3, always previously well, was taken by his parents to Los Angeles early in January, 1904.

History.—While there he was closely associated with his father's father, who had a chronic cough and had been told he had laryngeal tuberculosis. About February 1 the child began to complain of headache, putting his hand over the forehead when asked to locate the pain. At the same time he became listless and lost his appetite. On February 8, because of the child's indisposition, the parents brought him back to San Francisco. On the journey home he began to vomit and vomited persistently for nearly a week afterward. Then for a week there was no vomiting, then once more a recurrence, and at intervals subsequently during February the vomiting continued. During the whole time the headache persisted, always in the forehead. The bowels were continually and obstinately constipated. The child gradually grew restless and weak from loss of food. He had a little fever all the while, as noted by the mother, who possessed a clinical thermometer, and he lost a good deal in weight during his illness. On February 22 it was noticed, for the first time, that he was drowsy and could not be interested in any way. I first saw him on February 23, when the foregoing history was elicited.

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* Read before the San Francisco County Medical Society, 1905.

Examination.—The boy was still very drowsy and slept continually if left alone, but could be aroused. His pulse was from 70 to 80 and its rhythm slightly irregular. His temperature by rectum was 100.4 F. His abdomen was much depressed. The pupils were moderately dilated and reacted sluggishly to light. As soon as my examination was completed the child immediately dropped asleep again. On February 24 and 25 the condition was practically unchanged, except that the stupor was even deeper and the pulse even more slow and irregular. The temperature remained below 101 F.

Subsequent History.—On February 25, on my advice, the child was taken to Lane Hospital, and there he stayed during the remainder of his illness. On February 26 a lumbar puncture was made and about 12 c.c. of clear fluid were withdrawn from the spinal canal; this was submitted to Dr. William Ophüls for examination, and his report showed that the sediment contained a moderate number of leucocytes, of which 10 per cent. were polymorphonuclears, 81 per cent. were lymphocytes and 9 per cent. large mononuclears; no tubercle bacilli were found in the sediment and no other bacteria. The blood count showed a leucocytosis of 12,000.

From this time on the clinical history was that of irregular fever and persistent stupor, with gradually progressive increase in the pulse rate and decrease in strength until the end. Peculiar symptoms noted from time to time, characteristic of this disease, were the "tache cerebrale"; the bright flush on one cheek, while the rest of the face was pale; the grinding of the teeth; the irregular respiration rate, now and then approaching the Cheyne-Stokes type; the twitching of one or of the other extremity; the rigidity of joints, now in upper, now in lower limbs; the frequent vomiting, regardless of food taken; the retraction of the head and stiffness of the neck; the recurring strabismus, now divergent, now convergent; the irregular pupils, at one visit both widely dilated, at another unequal in size; and, finally, toward the end, general convulsions lasting for several minutes and repeating themselves at longer or shorter intervals. The child died on March 9 after an illness of approximately five weeks. No autopsy was permitted.

CASE 2.—On the evening of Sept. 22, 1904, a negro boy was found by the police lying unconscious on one of the streets of San Francisco.

History.—He was taken at once to the Receiving Hospital. There papers were found in his pockets that established his identity, and he was sent to the home of his parents. He remained there under the care of a surgeon until September 23; but, as his condition did not improve, he was then sent to Lane Hospital. At that hospital he was first referred to the care of the surgical staff; but, as no injury could be discovered by them to account for his coma, he finally came into the hands of the medical service. I saw him first on September 26.

The history of his illness was a very meager one. His parents could only relate that the boy was 18 years old, had run away from his home a year before to go to sea, and that they had never seen him since then until they were called to the Receiving Hospital to find him lying unconscious there.

Examination.—He was in a deep coma and could not be roused. His head was retracted and could not be brought forward, because of the rigidity of the muscles at the back of the neck. The pupils were moderately dilated and did not react to light. There was a facial paralysis on the right side so that the right eye was widely open and staring, while the left side of the face was much distorted. There was continual twitching, now of the hands, now of the feet, and at times a nervous tremor of the entire body sufficient to shake the bed. He seemed very restless and uneasy, moaning and groaning much of the time. Physical examination revealed no disease of heart, lungs or abdominal viscera, but the abdominal walls were much depressed. There was no swelling of any joint, but all the limbs were held rigidly and could be bent only by force. There was a typical Kernig sign in both lower limbs. Fever had been continuous from the date of his admission, ranging from 100 to 102 F. The pulse was regular but rapid, averaging from 100 to 110. The white blood count showed a leucocytosis of 10,500 on September 24 and of 11,200 on September 26. Lumbar puncture, made several times, revealed always a clear fluid, which flowed freely, as much as 35 c.c. being drawn on one occasion. This fluid, examined by Dr. Ophüls, showed no bacteria in coverslips, no visible growth in beef tea or in glycerin agar-agar inoculated with several c.c. and no bacteria in coverslips from the cultures. The sediment from the fluid showed a few lymphocytes, a few polymorphonuclear leucocytes and a moderate number of large bean-shaped diplococci, but none of them intracellular and all staining by the Gram method. The urine was continually voided involuntarily, and a specimen obtained by catheter showed a light cloud of albumin and an abundance of pus corpuscles, but no casts. Examination of the eye backgrounds by Dr. Edward Sewall showed normal discs, except that the veins appeared engorged and tortuous.

Subsequent History.—From the time of his admission the patient was unable to swallow, and, therefore, had to be fed by rectum and ultimately by means of a catheter passed through the nose. He never regained consciousness and the coma grew deeper and deeper. His pulse gradually grew more rapid and weak and his fever continued to rise higher each day until, finally, at the last examination before his death, the pulse rate was 192 and the temperature 107.4 F. He died at midnight on September 28, five days after entering the hospital and six days after he was found on the street.

Autopsy.—An autopsy was made on September 29 by Dr. William Ophüls. I quote from his report as far as it concerns the brain: "The skull cap is easily detached from the dura mater. A little fluid blood and some soft clots are found in the longitudinal sinus. The dura shows diffuse dark red and purple discoloration. It is very tense. The inner surface shows marked redness. There is very marked hyperemia of the pia mater, the surface of which is dry. In some of the sulci along the convexity and in those near the Sylvian fissure there is a moderate collection of slightly yellowish opaque exudate. This exudate is all in the subarachnoid space. In both Sylvian fissures, in the pia mater, back of the optic nerves, and in front of the pons and medulla there is a purulent infiltration of the membrane. A little clear fluid escapes from the spinal canal. The purulent infiltration extends a little way along the olfactory bulb. The right temporal lobe is very soft; both lateral ventricles are very considerably dilated and filled with clear serous fluid. There is also moderate dilatation of the third and fourth ventricles. The brain substance at the base is soft, almost liquid. There are no signs of tubercles around the area of purulent infiltration, but there are some just visible translucent nodules in the ependyma of the lateral ventricles."

Besides these conditions found in the brain, the autopsy revealed in the upper lobe of the left lung a cavity about the size of an almond filled with broken-down cheesy material; there were a few tubercles in the surrounding area. In the peribronchial glands on the right side were found a few old tubercles, and in one on the left side there was a large caseous area; but there was no tuberculosis in the right lung. One of the deep cervical glands on the left side, about the size of an almond, was almost completely caseated; and there was extensive tuberculosis of one of the lymph glands at the arch of the aorta. Finally, in a Peyer's patch in the upper ileum and in one just in front of the ileocecal valve there was found a slight swelling in the center, with an irregular superficial defect; in the neighborhood of the first lesion there were a few just visible tubercles in the mucous membrane.

The anatomic diagnosis was as follows: "Tubercular meningitis; hydrocephalus internus; two recent small tubercular ulcers in the intestine; tubercular cavity in the anterior part of the upper lobe of the left lung; old tuberculosis of the deep cervical glands on the left side, of the lymph glands of the arch of the aorta and of the left peribronchial lymph glands."

CASE 3.—A boy, aged 3, an only child, was brought from the country to my care at Lane Hospital on Nov. 2, 1904.

History.—In June previous the child fell downstairs, eighteen steps, but apparently sustained no serious injury and no bruises could be found about the body. The latter part of July he awoke from his daily nap, complaining of a cramp in his left leg. This pain and cramp persisted for several hours in spite of treatment, then passed off entirely and left no lameness; so that the child in the afternoon could run about the house without difficulty. In the evening, on going to bed, complaint was again made of some lameness. The next morning, on waking, the child again had cramp in the left leg and could not put the foot to the floor. For four weeks following this the boy could not walk. He was brought to Oakland and kept there during that time under treatment in a sanitarium. The limb continued painful and the child lost in weight and in color. Gradually, however, he again improved in appetite and weight and his limb grew better, so that finally he could walk once more. By the end of September he was able to return to his home in the country and to be about constantly on his feet. Early in October the limb again began to give trouble and ever since had made him walk lamely, sparing his left leg. For months past it had also been observed that the boy placed his hands on his knees to support himself in rising from a chair or in sitting down and that he held himself stiffly in movements involving any bending of the spine. On October 30 the child began to complain, for the first time, of pain in the head. Since then the pain had been persistent, and he did not want the head moved because it hurt him. He had been observed for weeks past to have a slight elevation of temperature every afternoon, running as high as 100 or 100.5 F. by rectum. Since the onset of the pain in the head the temperature had gone higher—as high as 102 F. at night. The night of October 30 the child vomited, again on the 31st and again on November 2, without apparent reason, for no food had been given meanwhile except a little broth and milk. He had lost his appetite completely and it was difficult to make him take any food since the onset of the pain in the head. He had also become drowsy during the few days since the headache began, and slept most of the time if undisturbed.

Examination.—The little patient was found to be pale and poorly nourished. His pupils were dilated, but equal and responded to light. The head was held stiffly, and the child cried if it was forcibly moved forward. No abnormality was found about the lower limbs. They were equal in size and development, and there was no limitation of motion at knee or hip in either limb. In the lumbar region of the spine there was found a decided swelling, extending more to the left than to the right of the median line and involving three spinous processes. There was no redness over this swelling, but there appeared to be considerable tenderness. The white blood count showed 13,800 white corpuscles. The urine contained no albumin or casts. For the sake of exclusion the blood was examined for a Widal reaction, but there was no reaction in one hour with a dilution of 1 to 10. In this case, the parents objected to lumbar puncture and, therefore, it was not made.

Subsequent History.—The subsequent course of this case was very similar to that of the first one reported. Little by little the child grew more drowsy and finally sank into a coma from which he never roused. His pulse for several days was slow, averaging 92 in rate, and was at times intermittent and irregular. Gradually it grew more rapid and weak as the case progressed and as death approached until it became 140 to 170 and very thready. The temperature was irregular throughout, ranging most of the time between 100 and 102 F., but several mornings touching the normal line, even as late as the day before he died. These remissions in temperature, however, were never accompanied by any improvement in the mental condition. The child died on November 15, about two weeks after the onset of meningeal symptoms. Four days before he died the parents took him back to their home in the country, so that the last stage of the illness was not under my observation; but no general convulsions occurred and, except for spells of tossing about of the limbs and frequent grinding of the teeth, there was no interruption of the earlier stage of the stupor. No autopsy was obtained.

The phase of this subject to which I wish to call particular attention is the diagnosis. The disease is a frequent one in infants and in young children; and occurring as it does at an age when an accurate statement of symptoms can never be obtained, it always offers an interesting problem for solution. It is common enough to attribute the first manifestations of the disease to some other condition; and one other case which I have not herewith reported, but which I saw in the early part of last year, will call attention to the opportunities for error in the early detection of the real trouble. On Jan. 14, 1904, I attended an infant, aged 19 months, who appeared to have a disturbance of stomach and intestines. He had recently been vomiting his food and had had some diarrhea following a history of improper feeding. I gave the usual fractional doses of calomel, regulated the diet, and in a day or two the child seemed perfectly well again. The next time I saw him, on February 22, it was in consultation with Dr. E. G. Frisbie, who had been called a short time after my attendance because the baby did not continue to improve. At the time of this consultation the child was in a condition of coma, with pupils widely dilated and not reacting to light, with the pulse irregular in rhythm, with twitching and contraction of the muscles, with marked retraction of the head and with persistent vomiting and high fever. Death occurred on February 24. This case illustrates how easy it is at the outset of tubercular meningitis to suppose the condition one of acute indigestion. The lesson to be drawn from this experience and from the cases herewith reported is that one should always be suspicious of tubercular meningitis in a child in every case of illness that is associated with disturbance of digestion, a slight degree of fever and peevishness and irritability of temper. With older children, able to talk, the complaint of headache is a valuable early guide as to the site of the mischief, but with infants the diagnosis can not be made with certainty until some days have elapsed, because of the vagueness of the symptoms of onset. If one bears in mind this very fact of the indefiniteness of early symptoms and the possibility that they mean serious disease, he will not be so likely to make a mistake.

More definite symptoms are those of disturbance of the mental condition. In the very beginning these symptoms are due to irritation of the brain, and consequently fretfulness, peevishness, restlessness and insomnia are the phenomena produced; but such symptoms are common to so many diseases in infancy and childhood that they have no definite diagnostic meaning.

Last April, in Vallejo, with Dr. J. J. Hogan, I saw a child that for two or three days previously had been in a state of violent excitement, screaming and crying and tossing about without apparent cause. There was no fever and no vomiting and at the time no explanation for the condition could be found. Gradually, however, this condition of frenzy changed to one of drowsiness and coma and the child's later condition was typical of tubercular meningitis. It is this condition of quietness, drowsiness, loss of interest in surroundings and gradually increasing stupor that rightly gives rise to apprehension of serious cerebral disease; especially if the development of this change has been a slow one, and if it is associated with a low grade of fever. Perhaps the mistake most often made about this mental condition is to assume that it inevitably means meningitis. I have repeatedly seen infants supposed to have meningeal disease, when the stupor was due purely to intestinal toxemia or to some acute infection with high fever, such as lobar pneumonia. In such cases the onset of the cerebral symptoms has usually been rapid, and there is much higher fever than tubercular meningitis would present at so early a stage in its clinical history.

Still more definite is the evidence of irritation or of intracranial pressure, as manifested in parts outside the brain; such as the unequal pupils, the widely dilated pupils, or the pupils that refuse to respond to light; also the various local paralyses about the muscles of the eye, as in strabismus, or in the muscles of one side of the face or in one limb; or such as the irregular pulse and respiration. All these manifestations, however, may be variable and transient; present one day and absent the next. Indeed, the mental condition itself is a variable one from day to day, and it is not rare to find a child at one visit in profound stupor, incapable of being roused, while at the next visit the child will respond when spoken to and recognize its parents and those about its bedside. This variability in the mental condition is one of the saddest features of tubercular meningitis, for it raises false hopes in those who do not understand its lack of significance and who wrongly interpret it to mean improvement.

When we come to the evidence to be obtained by direct physical examination of the patient with meningitis, and to the various chemical and microscopic tests that give us aid, we find that there are a number of points that help us greatly in the diagnosis. First of all comes retraction of the head, and at times this is so marked that no one, not even the parents, can overlook it; often the head is drawn backward until the occiput nearly touches the back. More frequently, however, the condition found is simply one of stiffness and rigidity of the muscles at the back of the neck, so that the child will not permit the head to be carried forward with the chin against the sternum. This latter condition may be discovered only by examination and may not produce any visible alteration in the usual position of the head on the pillow. The value of this sign when it is discovered is great, and I know of no conditions that simulate it except a rheumatic torticollis, which is more likely to be lateral than anteroposterior, and disease of the cervical vertebræ which is not usually associated with the other symptoms and signs of tubercular meningitis. The Kernig sign, so valuable in adults, is, in my experience, more difficult to elicit in young children, because they can not be persuaded to eliminate the fear of being hurt by manipulation and, therefore, hold the limbs rigidly even though no meningitis is present as a cause. The white blood count gives valuable evidence both as to the presence of a meningitis and as to the character of the meningitis. The leucocytosis found is usually that of other tubercular disease; namely, one of moderate degree. In the cases reported the average count was 12,000, and such a count means, in the first place, that there is some inflammatory process present in the body and, in the second place, that this process is not acute and virulent. The absence of any leucocytosis would speak against the presence of meningitis, while the presence of a high leucocytosis would speak for some other form than the tubercular.

Lumbar puncture gives us evidence that is negative rather than positive, but it is a diagnostic aid we would not like to do without. The fluid obtained is usually clear and not turbid; tubercle bacilli are usually not found either in coverslips or in cultures; and the sediment obtained by centrifugalizing is usually very small in amount and contains few cells. Attention has recently been called to the fact that the cells found in the spinal fluid are mainly lymphocytes in tubercular meningitis, whereas the polymorphonuclear cells predominate in other types of the disease, such as the epidemic or the septic. It is, therefore, the discovery of a clear fluid containing no micro-organisms and but few cellular elements that is characteristic of tubercular meningitis. Lumbar puncture is by this time recognized to be a procedure practically harmless if properly performed, and it is so easily done that it should never be omitted in the effort to obtain data for diagnosis, provided the consent of parents can be obtained.

The second case described, although it did not occur in a child, calls attention to several points that have an immediate bearing on diagnosis. First, the very fact that this case occurred in an adult is of interest, because we are too apt to think of tubercular meningitis as a disease only of children. It is certainly more common in infancy and in childhood, but it can never be ruled out as a possibility in diagnosis because the patient has passed a given age. Second, a case seen for the first time in its later stages may appear to have had a sudden onset and, therefore, to belong to some other type of meningitis than the tubercular. Even when the history of illness is known from the beginning, as it was not in this case, there may still be an apparently sudden onset, because the trivial symptoms preceding the grave ones were unnoticed. One must not, therefore, be guided too much by a history of sudden onset in determining the form of meningitis present. Third, even though the onset be apparently sudden and the symptoms at the time of the first observation are violent and severe, it still remains possible by means of the blood count and lumbar puncture to differentiate tubercular from the other types of meningitis. In this particular case of the young negro referred to, the history and the physical condition at the time he was first seen indicated that he was suffering from the epidemic form of cerebrospinal meningitis. The low blood count, however, was against the latter diagnosis; the fluid obtained by lumbar puncture was at all times characteristic of tubercular meningitis; and at no time were the organisms found that are characteristic of the epidemic type. Fourth, this case, the only one in which an autopsy was obtained, demonstrates that tubercular meningitis is rarely or never a primary disease. There is always a tubercular focus somewhere else in the body to which meningitis is secondary. This focus can not always be found, even if careful search is made for it; but, on the other hand, such search will many times lead to the discovery of tubercular disease elsewhere, either in lungs, abdominal organs or bones, that existed for some time before the symptoms of meningitis presented themselves. In the third case referred to, for instance, there was a definite history of tubercular disease of the vertebræ for some months before the meningitis occurred; and on physical examination there were definite signs of such disease present to account for the meningeal complication. In children it is frequently an infection of the bronchial glands that precedes the disease of the meninges, and the only evidence that can be obtained is a history of persistent cough for some weeks before; though physical examination of the lungs may give very indefinite signs of pulmonary disease. Fifth, if one has any doubt, during the course of a case, whether or not the meningitis is of the tubercular type, the outcome decides the question. A case considered during its clinical course to be tubercular meningitis may be looked on as an error in diagnosis if recovery takes place; for this disease must be set down as uniformly fatal, and we know of no remedies that will stop its progress. Other forms of meningitis may end in recovery, but the tubercular form practically never does. It is true that a few cases have been reported in which recovery occurred even when the diagnosis seemed positively determined; but they are so few they do not alter the general statement.

In conclusion, the problem presented by these cases is always twofold: First, is meningitis present, and, second, is it tubercular meningitis? In deciding the first point, one must consider the various symptoms and signs already described in the cases presented, and which are more or less common to all types of meningitis. Other conditions occurring in infants and in young children that give rise to similar symptoms are the following: First, acute intoxications, usually intestinal in origin; second, acute infections, such as lobar pneumonia, in which the primary condition is masked temporarily and the meningeal symptoms predominate; third, typhoid fever; and, fourth, uremia, which can easily be eliminated if the urine is examined.

In deciding the second point, one must bear in mind the possible varieties of meningitis and consider the evidence with reference to each. They are as follows: First, the tubercular variety, usually secondary to a focus of tuberculosis elsewhere in the body, with the characteristic clinical history, physical signs and blood count described in the cases herewith presented and with a sterile fluid obtained by lumbar puncture; second, the septic variety, which occurs most often secondary to abscess in the middle ear or to fracture of the skull, and which has a sudden onset, a high leucocytosis and a fluid obtained by lumbar puncture that is more or less turbid, containing the organisms of sepsis in coverslips and in cultures and excess of polymorphonuclear cells; third, the epidemic form, which usually has a sudden onset, a high leucocytosis, a turbid fluid obtained by lumbar puncture, containing the meningococcus and an excess of polymorphonuclear cells; fourth, the pneumonic form, which usually occurs as a complication of lobar pneumonia, is sudden in onset, has a high leucocytosis, and shows the pneumococcus in the fluid obtained by the lumbar puncture; fifth, the posterior basic meningitis, described by Still, of which the characteristic clinical feature is the excessive retraction of the head, which is chronic in its course, which usually presents itself during an epidemic of the cerebrospinal form of the disease, and in which the fluid obtained by lumbar puncture shows either the meningococcus or else no organism at all. In these cases recovery sometimes takes place after a clinical course of weeks or months.

PHYSICIANS IN FICTION.

PHYSICIANS AS SEEN BY HENRY FIELDING.

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We deem it appropriate to begin the study of the types of physicians in fiction with an author who, according to Sir Walter Scott, was "the father of the English novel" and whose "Tom Jones" is considered by the foremost critics to be the greatest novel that was ever written. Although many of the libraries here and abroad have placed Fielding's works in *the index expurgatorium*, yet the observation made by Burrow[1] some sixty years ago holds good even in our generation. He calls Fielding "the most singular genius their island produced, whose works it had been the fashion to abuse in public and to read in private."

In "Joseph Andrews," "Tom Jones" and "Amelia" no physician appears as a prominent character, but a number of medical men, surgeons and apothecaries make their appearance, and, with the exception of two, they offer excellent material for the formation of an opinion of the prevailing tendencies, foibles, shortcomings and petty jealousies among the physicians of the Eighteenth Century. We say "prevailing tendencies" advisedly. For, notwithstanding the fact that that century had produced such eminent physicians as Cheselden, Pitcairn, Arbuthnot, Cullen, Douglas, the Monroes, father and son, the Hunters and others. their influence did not manifest itself universally until the beginning of the Nineteenth Century. The select body of physicians consisted of men of culture, whatever we may think of their therapeutic attainments, but the general run of surgeons and apothecaries of that period, we must admit, possessed but little general education and scant scientific equipment. In the hands of Fielding the latter become fit subjects for ridicule.

In "Tom Jones" we find one of those unfortunates whom we meet even in our day, "a gentleman who had the misfortune of losing the advantage of great talents by the obstinacy of a father who would breed him to a profession which he disliked. In obedience to this obstinacy the doctor (Bilfil) has in his youth been obliged to study physic, or, rather, to say he studied it; for, in reality, books of that kind were almost the only ones with which he was unacquainted, and, unfortunately for him, the doctor was master of almost any other science but that by which he was to get his bread; the consequence of which was that at the age of 40 he had no bread to eat."

The sum total of the knowledge of the causation of disease is thus wittily described: Captain Bilfil died suddenly, and two doctors were summoned. "Having felt his pulse, to wit, Dr. Y. his right and Dr. Z. his left, both agreed that he was absolutely dead; but as to his distemper or cause of his death they differed; Dr. Y. holding that he died from apoplexy and Dr. Z. from epilepsy. To say the truth, every physician almost has his private disease, to which he ascribes the victories obtained over human nature. The gout, the rheumatism, the gravel and the consumption have all their several patrons in the faculty; and none more than the nervous fever, or the fever of the spirits."

That the expectant treatment was an unknown quantity in those days, and was considered a subject worthy of ridicule, is well illustrated by the following grave discourse:

"There is nothing more unjust than the vulgar opinion by which physicians are misrepresented as friends to death. On the contrary, I believe if the number of those who recover by physic could be opposed to that of the martyrs, the former would rather exceed the latter. Nay, some are so cautious on this head that to avoid a possibility of killing a patient they abstain from all methods of curing and prescribe nothing but what can neither do good nor harm. I heard some of those who with great gravity deliver it as a maxim 'that nature should be left to do her own work,' while the physician stands by, as it were, to clap her on her back and encourage her when she does well."

The boastful, garrulous and voluble surgeon, as well as the medical vocabulary of that day, is masterly depicted thus: "Jones fractures his arm while saving the life of Sophia. The surgeon bleeds Sophia first and then proceeds to examine Joseph's arm, and, holding forth his broken arm, he began a very learned and very long lecture, in which simple and double fractures were most accurately described: and the several ways in which Jones might have broken his arm were discussed, with proper annotations, showing how many of these would have been better and how many worse than the present one."

On another occasion Jones receives a blow on the head. The surgeon, "having viewed the wound, having shaken his head and blamed everything that was done, ordered the patient instantly to bed." When asked a little later how his patient did, he answered: "Better, I believe, than he would have been by this time if I had not been called: and even as it is, perhaps, it would have been lucky if I could have been called sooner. . . . I remember to have been called to a patient who received a violent contusion in his tibia, by which the exterior cutis was lacerated so that there was a profuse sanguineous discharge and the interior membranes were so divellicated that the os or bone very plainly appeared through the aperture of the vulnus of the wound. Some febrile symptoms intervening at the same time (for the pulse was exuberant and indicated much phlebotomy), I apprehended immediate mortification." When pressed with the question whether Jones is in danger: "In danger, ay surely," cries the doctor; "who is there among us, who in the most perfect health, can be said not to be in danger? All I can say at present is that it is well that I was called as I was, and it would have been better if I had been called sooner, . . ."

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[1] Spain and the Bible. 1848.

At the second visit the landlady informs the surgeon that Jones suffers from an "eating fever, for he has devoured two swinging buttered toasts this morning for his breakfast." The surgeon finds no difficulty in explaining away this physiologic paradox:

"Very likely; I have known people eat in a fever, and it is very easily accounted for; because the acidity occasioned by the febrile matter may stimulate the nerves of the diaphragm and thereby occasion a craving which will not be easily distinguished from a natural appetite; but the aliment will not be concreted nor assimilated into chyle, and so will corrode the vascular orifices and thus will aggravate the febrific symptoms."

Another illustration of clear pathology and distinct nomenclature is to be found in "Joseph Andrews." Joseph was beaten unmercifully. The surgeon pronounces: "His case is that of a dead man. The contusion on his head had perforated the internal membranes of the occiput and divellicated that small, minute and invisible nerve which coheres the pericranium and thus was attended with a fever, at first symptomatic, and he is at length grown delirious, as the vulgar express it."

The barbers, who during many centuries performed the functions of surgeons, have even as late as the Eighteenth Century competed with the surgeons for supremacy. Fielding introduces in "Tom Jones" a barber by the name of Benjamin, "a fellow of great oddity and humor," who undertakes to treat Jones.

"'So, tonsor,' said Jones, 'I find you have more trades than one: how came you not to inform me of this last night?'

"'A surgeon,' answered Benjamin, with great gravity, 'is a profession, not a trade. The reason why I did not acquaint you last night that I professed this art was that I then concluded you were under the treatment of another physician, and I never love to interfere with my brethren in the business.'"

In "Amelia" we find a description of how a physician and an apothecary pull together—a coalition entered into even in our day. A physician is called to see Amelia's sick child.

"He began to inquire of the apothecary what he had already done for the patient; at which as soon as informed he greatly approved. The doctor then sat down, called for pen and ink, filled a whole side of a sheet of paper with physic, then took a guinea and took his leave, the apothecary waiting on him downstairs as he attended him up."

The hostility with which physicians looked on innovations is described in the following episode: The father of a sick child asks the physician for a consultation with an eminent physician, Dr. Thompson."

"'Excuse me, sir,' cried the doctor hastily, 'I shall not meet him. Shall I meet a man who pretends to know more than the whole faculty and would overturn the whole method of practice, which is so well established, from which no person hath pretended to deviate?' 'Indeed, sir,' cries the apothecary, 'you do not know what you are about, asking your pardon; why, he kills everybody he comes near.'"

In the story of the "Man on the Hill," in "Tom Jones," he pays a tribute of respect to his own surgeon, Dr. Ranby. He says:

"R. had the first character in his profession, and was sergeant surgeon to the King. He had, moreover, many good qualities and was a very generous and good-hearted man and ready to do any service to his fellow creatures."

The revulsion against polypharmacy is expressed in the words of Dr. Thompson, who "blew up the physical magazine," that is, he discontinued the administration of the many powders and potions; he "blooded" the patient instead, gave her a clyster, etc.

Notwithstanding the fact that all his medical types play such an insignificant part in his works that they can hardly be called characters from the standpoint of the reader of modern novels, yet we believe that the medical reader with a critical eye will find every line pregnant with curious historical data concerning our brethren of almost two centuries ago. Fielding has truly estimated his own works by saying that they depict "not men but manners, not an individual but a species."

That Fielding did not write about physicians from hearsay or imagination, but from an intimate acquaintance with the medical profession, is evident from the fact that he was an invalid for many years. He came in contact now with the most eminent surgeons and again with most celebrated quacks. Fielding suffered from gout all his life, and having been a high liver he succumbed at the age of 47 to a complaint which was characterized by dyspnea, jaundice, dropsy, extreme feebleness and emaciation. There is no doubt that he suffered from cirrhosis of the liver. He was treated by the following: In 1749[2] by Dr. Thomson, who is described by Johnson as "a man who had by large promises and free censure of the common practice of physic forced himself up into a sudden practice." In 1751 we find Fielding taking the water cure[3] in Somersetshire, which he claimed publicly had relieved him from a disease which baffled the most skillful physicians. Of course, as subsequent events have shown, he did not obtain any permanent relief. In 1752 he had a literary tilt with Dr., afterward Sir John Hill.[4] During the same year he was taking the Duke of Portland medicine, a popular Eighteenth Century gout powder. The disease, however, made rapid strides, and a deep jaundice set in. Dr. Ranby[5] advised him to go to Bath. In 1754 he returned to London in a most deplorable condition and placed himself under the care of the notorious Joshua Ward,[6] who was, however, the first to relieve Fielding of his dropsy by tapping. In May of the same year he was induced to take up the tar cure.[7] As a last hope he was advised to go to Portugal. While on board the ship he was tapped by the celebrated William Hunter. He died in Lisbon Oct. 8, 1754.

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[2] He must have been under the care of a physician prior to this date, but I was unable to find any record.

[3] This cure came in vogue through an obscure man, who was afflicted with what was considered an incurable case of asthma, and who saw in his dream "near the chain-gate, in the horse track, the clearest pool of water, and that a person told him if he drank a glass of the same, fasting for seven Sundays, he would be cured."

[4] Hill was originally an apothecary, but abandoning his business for the stage he produced a few bad farces at the Haymarket, in which he appeared as an actor. Garrick wrote the following epigram on Hill:

For physic and farces
His equal there scarce is,
His farces are physic,
His physic a farce is.

Having been hissed off the stage, he took up the study of medicine and natural history. He seems to have been a prolific writer. The Surgeon-General's Catalogue has 12 entries under his name, mainly on subjects of materia medica.

[5] Ranby wrote a celebrated essay, "The Method of Treating Gunshot Wounds."

[6] From the Catalogue of the Surgeon-General's Library I conclude that Ward made himself famous by his "drop and pill." There must have been quite an agitation among the profession concerning this remedy. Clutton, for instance, writes a pamphlet in 1736 entitled "A True and Candid Relation of the Good and Evil of Joshua Ward's Pill and Drop." Packe writes an answer to Dr. Turner: "On the subject of Ward's drop and pill wherein his (Dr. Turner's) ignorance of chemical pharmacy is fairly exposed." Tennent, in 1742, writes: "On the mercenary practice of physicians . . . and by his (Dr. Ward's) pernicious progress with medical secrets." Even as late as 1763, Page writes: "Receipts for preparing and compounding the principal medicines made use of by the late Dr. Ward." Pope refers to him: "Ward try'd on Puppies and the poor his drop." He is mentioned in Hogarth's "Consultation of Physicians," 1736. He was the attending physician of George the Second. I should have liked to know more of Mr. Ward, but the literature is not accessible.

[7] Bishop Berkley wrote a treatise in 1744, "Philosophical Reflections and Inquiries Concerning the Virtues of Tar Water." Horace Walpole gives in a letter to Mann the following humorous account of the tar-water craze: "We are now mad about tar water, on the publication of a book by Dr Berkley. The book contains every subject from tar water to the trinity: however, all the women read—and understand it no more than if it were intelligible. A man came into an apothecary's shop the other day. 'Do you sell tar water?' 'Tar water,' replied the apothecary, 'why, I sell nothing else.'"

That Fielding wrote his novels not solely for the amusement of his contemporaries, but also with a view of imparting to future generations valuable data of the habits, customs, morals, etc., of the men and women of his day, and that he also possessed the prophetic sense of foreseeing that some day his novels would be read by some one (whether by the present writer or not remains a mooted question) for the sole purpose of studying the medical types he has described, is evident from the following remarks found in "Amelia":

"Some readers will think the whole chapter (the consultation of the physician quoted above) might have been omitted, but though it contains no great matter of amusement, it may at least serve to inform posterity concerning the present state of physic, . . ."

Special Article

IMMUNITY.

CHAPTER XV—Concluded.

Old Age. Metchnikoff, taking the view that the phenomena of old age depend on the destruction of various tissue cells by the mononuclear leucocytes, expressed the hope that a lymphotoxic serum might be utilized to combat the action of these cells, with the result that life would be prolonged. Whether or not his view as to the cause of old age is correct, his plan of antagonizing it had to be abandoned because leucotoxic serums do not injure the "macrophages" (large phagocytes) to the exclusion of other leucocytes.

Effect of Leucotoxic Serum on Resistance to Infections. The injection of a leucotoxic serum into the peritoneal cavity of a guinea-pig causes a temporary decrease in the number of leucocytes, and during this period of hypoleucocytosis the resistance of the animal to peritoneal infections with the organisms of typhoid and cholera is lowered. One may refer this effect to the destructive action of the serum on the leucocytes, by which phagocytosis is prevented; or, according to Wassermann, it may depend on the action of anticomplement which the leucotoxic serum contains. Leucocytes contain complement, hence immunization with leucocytes causes the formation of anticomplement. In the course of 24 to 48 hours after peritoneal injection of the serum, the leucocytes reaccumulate to an enormous extent. During this secondary hyperleucocytosis resistance to peritoneal cholera or typhoid is increased. Some non-toxic substances, as bouillon, have a similar effect, and although the secondary leucocytosis is never so great as that caused by the leucotoxic serum, the protective action is equally high. It would seem that, leucocyte for leucocyte, those which accumulate following the injection of leucotoxic serum are less efficient in antibacterial action than those whose presence is caused by non-toxic substances. Hence there probably is no field for leucotoxic serum as a means of temporarily increasing resistance to bacterial infections.

By guarded immunization Besredka obtained an antileucotoxic serum.

Nephrotoxic Serum. Nephrotoxic serums have been brought into close relationship with clinical and anatomic problems by a number of investigators. Some normal serums are held to be nephrotoxic inasmuch as their injection is followed by albuminuria and renal degenerations. Immune nephrotoxins have a similar but more pronounced effect, and Lindeman referred the death of his experiment animals to the development of a uremic condition. Of more than ordinary interest is the claim of certain workers that autonephrotoxins may be formed in the body.

Autonephrotoxins. One (Lindeman) caused a toxic nephritis in dogs by the injection of potassium-bichromate. The serum of this dog, although free from chromic acid, was toxic for other dogs, producing the symptoms which are caused by an immune nephrotoxic serum. It was supposed that the chromic acid in the first dog caused disintegration of renal cells of the latter were then taken up by nephrotoxic receptors which normally reside in the organs of the animal; as a result the autotoxic receptors were overproduced and their presence became manifest when the serum was injected into other dogs. In accordance with this view the original toxic cause of a degenerative nephritis would be of less consequence for the continuance of the condition than the formation of the nephrotoxic amboceptors.

Somewhat similar results were obtained by others through ligation of the renal vein or artery on one side; constituents of cells of the isolated kidney were supposed to be absorbed, and as a consequence nephrotoxic amboceptors were produced in excess by organs of uncertain identity. To the new-formed bodies were attributed the degenerative changes which were found in the opposite kidney, and the nephrotoxic properties which the serum manifested when injected into a healthy animal of the same species.

According to Ascoli and Figari unilateral nephrectomy so injures the opposite kidney (overwork) that the serum of the animal becomes nephrotoxic. They state also that an animal, the serum of which contains nephrotoxin may antagonize the latter by the production of antinephrotoxin, and suggest that spontaneous recovery from nephritis may be due to the action of such an antibody. They would account for the cardiac hypertrophy of nephritis by the action of nephrotoxic serum in causing contraction of the peripheral vessels with consequent increase of blood pressure; and for the nervous symptoms on the basis that the serum contains a neurotoxic constituent.

We hardly dare consider such far-reaching conclusions as decisive until they have been extensively confirmed. Yet whatever may be their real value they serve to emphasize the possibility that those principles which are so important in relation to immunity against infectious diseases, may be equally important in relation to other pathologic conditions.

Hepatotoxins. Hepatotoxins have been obtained by a number of workers, and the attempt has been made to produce autohepatotoxins by injecting liver tissue of the guinea-pig into animals of the same species. The success was not unqualified. Hepatotoxins when injected are reported to cause insular degenerations of the liver; however, the lesions may be caused, in part at least, by capillary emboli of endothelial cells or erythrocytes.

Neurotoxin. Neurotoxic serums have been studied with some thoroughness. Whether one injects the cerebrum, cerebellum or spinal cord, the resulting serums apparently are similar: either an anticerebral or an anticerebellar serum will cause degenerations of the spinal ganglion cells. In view of their broad range of action it seems improbable that neurotoxic serums will be of service in clearing up the etiology of system degenerations of the nervous tracts. They are usually hemolytic and hemagglutinating and may also be endotheliotoxic and leucotoxic. When mixed with emulsions of the homologous brain tissue the neurotoxic amboceptors are bound by the receptors of the nervous tissue, and the serum consequently loses its toxicity. Antineurotoxic serums have been described.

Syncytiotoxin in Relation to Eclampsia. Syncytiolysin is the name given to a serum which is obtained by immunization with the placenta. Certain writers (Veit and Scholten, Charrin and Delamare) report that the injection of placentar tissue alone causes albuminuria, a consideration which led them to assume that the placentar cells contain a nephrotoxic substance. Inasmuch as placentar cells or their constituents may reach the circulation during eclampsia (Schmorl) it was not a long step to suppose that the nephritis of pregnancy is due to the toxic syncytial cells which are absorbed. The results which Weichardt reported gave some strength to the view just cited. By treating placentar tissue of rabbits with the specific syncytiolysin the toxin supposedly was liberated, and the mass when injected into normal rabbits is said to have produced symptoms of an eclamptic nature. On the basis of these observations the hope has been expressed that an antitoxin for eclampsia might be prepared by immunization with placentar tissue. However, the conditions are by no means simple; any value which the destruction of circulating syncytial cells or their toxin would afford might be more than offset by the action of the hemotoxin and neurotoxin which the serum is said to contain. Whether or not the hypothetical toxin of syncytial cells may be separated from the other cell constituents, and whether immunization with the toxin will yield an antitoxic serum are possibilities which remain for further investigation; the results cited have not been obtained by all observers.

Liepmann hopes for a serum-diagnosis of pregnancy. If, as supposed, the blood of a pregnant individual contains syncytial cells or their products of degeneration, the serum when mixed with a specific syncytiolysin may cause a precipitate. He claims to have demonstrated the presence of placentar constituents in the circulation by this biologic method.

Thyrotoxin.

Antithyroid serum is prepared by immunization with ground-up thyroid tissue or with extracts of the organ. It is hemolytic, even though all the blood has been washed from the tissue which was injected. Portis immunized with the "colloid" material of the gland obtaining a hemolytic thyrotoxic serum. When injected into the living animal degenerative changes are produced in the thyroid, and some authors report the tetanic phenomena which often follow surgical removal of the thyroid. In very careful work, however, Portis could not produce "the exact picture presented by thyrodectomized animals." Degenerative changes were found in various organs, as liver, spleen and kidneys.

Sympathetic Ophthalmia.

Brown Pusey has made the interesting suggestion in regard to sympathetic ophthalmia that the disease may be due to the formation of autocytotoxins which are specific for the cells of the inner surface of the ciliary body and iris. The disintegration products of the corresponding cells in the eye which was primarily injured would constitute the stimulus to the formation of the specific antibodies. The possibility is as yet a problematic one.

Pancreotoxin.

The experimental study of cytotoxic serums for the pancreas has, up to the present time, thrown little light on pancreatic diseases. It stated that the serum may cause transient glycosuria, and it is said to have an antitryptic action in experiments performed in the test-glass.

Other Cytotoxins.

The results of different observers concerning the action of antiserums for the adrenal gland are not in entire accord. Although degenerative changes may be caused in the gland when the serum is injected, the action is not specific; the serum may be highly hemolytic (Abbott).

Ceni claims to have demonstrated in the circulation of epileptics a cytotoxin which causes the epileptic attacks, and reports the production of a specific antitoxin.

Toxin of Exhaustion.

Weichardt has published descriptions of a toxin which is peculiar to states of exhaustion, giving an account of the specific antitoxin which he produced by immunization.

Other cytotoxins which have been prepared, as those for the pituitary body, gastric mucosa and cardiac muscle, have at the present time nothing more than general biological interest.

Concerning Autocytotoxins.

It would seem that no question in relation to cytotoxic serums is more important than the possibility that autocytotoxins may develop and institute the vicious cycle which was mentioned earlier. It is true that the results of some investigators suggest the probability of such a process, but it would be going too far to say that its existence as an important pathologic law has been established. On the contrary, the development of autocytotoxins is one of the rarest of occurrences in experimental work; and Ehrlich has spoken of the inability of the body to form such antibodies as a condition of "horror autotoxicus."

"Horror Autotoxicus."

The cells of our kidneys and our erythrocytes certainly do degenerate, and it is quite possible that the receptors which are thereby liberated actually reach cytotoxic amboceptors which are situated in other organs. In the event that the process extends to this point, Ehrlich assumes that the amboceptors are of a sessile nature, that in spite of the stimulation to which the cells are subjected the "sessile amboceptors" may not be overproduced and liberated as in the case of antibodies for bacterial substances or for the cells of other species. In accordance with this explanation we are saved from intoxications of the nature in question because of the sessile nature of the cytotoxic amboceptors.

(To be continued.)

Clinical Reports

EMPYEMA TREATED BY PERTHES' METHOD.

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AUBURN, N. Y.

After evacuation of the pus in cases of empyema, the huge suppurating cavity that remains must be obliterated. In cases in which the lung, though compressed against the spine or mediastinum, is not yet held in its false position by strong adhesions or by thick deposits of organized new material, aseptic opening and plentiful gauze dressings are sufficient. These dressings act as a valve as well as a protection from infection, and they absorb discharge. Air or gas present in the pleural cavity with every cough, indeed with every expiration, is expelled little by little into the gauze covering the orifice of the wound, while this mass of gauze applies itself too firmly to the chest to permit entrance of air from without, and there is produced within the thorax a tendency to a vacuum, a negative pressure, which sucks the collapsed lung out toward the chest wall. The ideal treatment, then, for empyema of recent origin is absolutely aseptic incision, with or without excision of a portion of the rib, one irrigation of the pleural cavity by salt solution—if necessary to remove fibrinous masses, otherwise no irrigation—and voluminous pad dressings of gauze firmly applied to the chest wall by means of an elastic bandage. When these dressings become soaked, they are changed under aseptic precautions. If no mixed infection occurs, we may confidently expect to cure these cases in a few weeks.

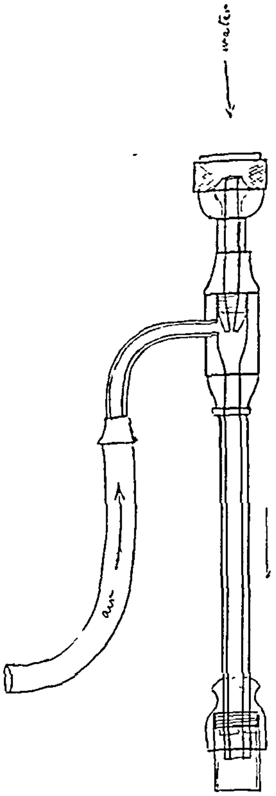

Fig. 1.—Saliva evacuator.

In a case in which effusion has been present long enough for the lung to be more or less bound down by adhesions, or in which evacuation and gauze dressings have not been followed by expansion of the lung, some means must be found of bringing lung and chest wall in contact, or the alternatives must be faced of a long and exhausting discharge, ending in waxy degeneration of the viscera and death, or a frightfully mutilating operation on the thoracic wall, in order to permit it to meet the shrunken lung and to obliterate the pleural cavity.

In these cases, Perthes' method is worthy of consideration. This method aims at the production of constant negative pressure, a tendency to a vacuum within the chest, with the expectation that the lung, unless held down by inextensible adhesions, will expand and adhere to the thoracic wall. Various pumps have been used to produce this constant suction, running water being the agent which has actuated them all.

Patient.—On May 16, 1903, J. B., aged 24, was transferred from the medical to the surgical service of the Auburn City Hospital for operation on left empyema.

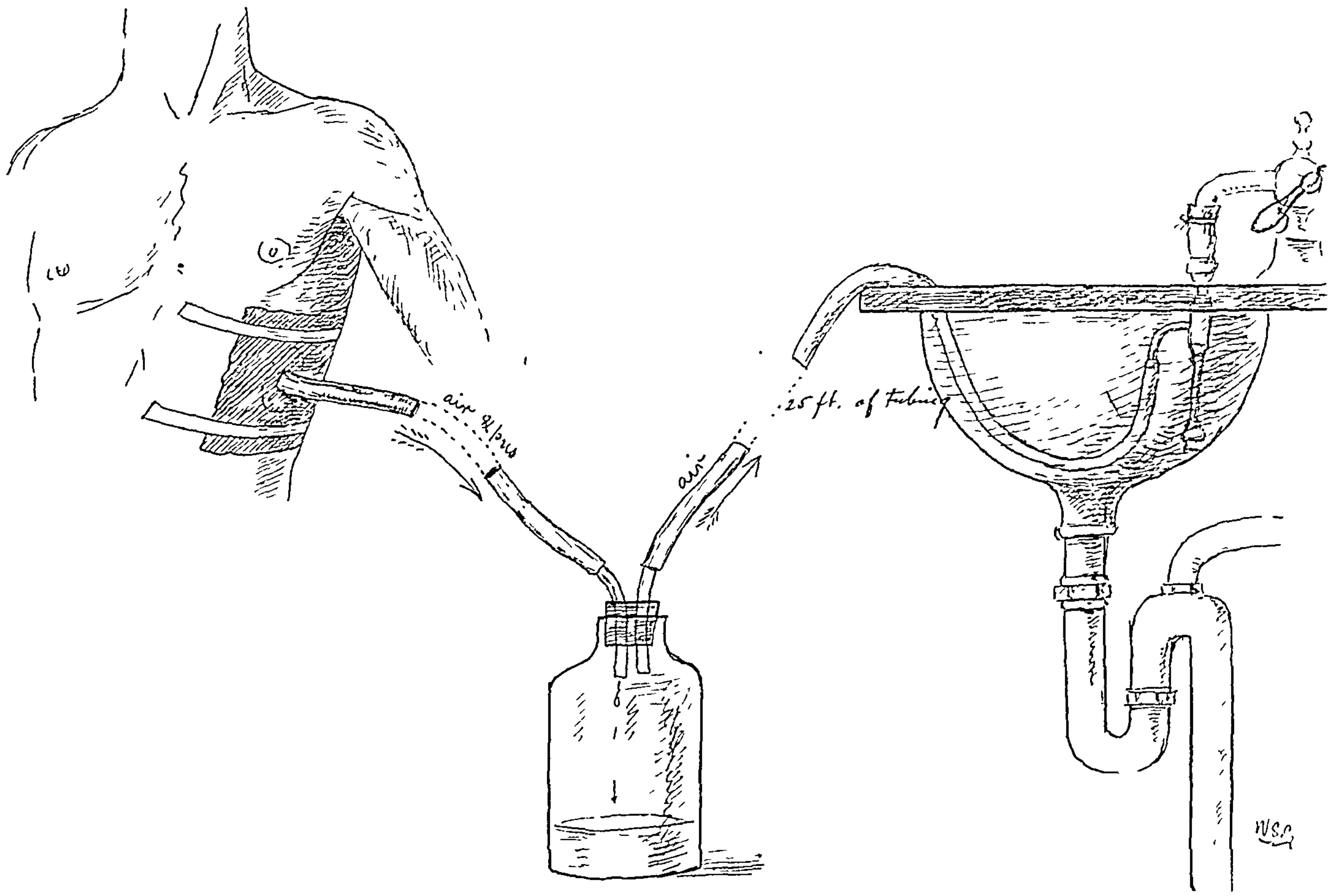

Fig. 2.—Shows rubber-dam cemented to tube and held in place by gauze dressings and bandage or binder.

History.—The patient had had severe pneumonia of the same side, and convalescence had only begun when empyema occurred. One aspiration had already been done, but pus rapidly reaccumulated.

Operation and Result.—May 16: The left chest seemed absolutely full of pus, and under ether so much embarrassment of respiration occurred, and the patient so nearly died, that the contemplated operation of rib-resection had to be deferred, immediate relief being given by what amounted to a stab in the eighth intercostal space. Pus escaped in a jet, a drain-tube was pushed into place and sewed to the skin, a gauze dressing was applied, and the patient was hurried to his room. Here he rallied and for some days there was satisfactory drainage. On May 22 I was surprised to find, on removing the dressing, that the drain-tube had torn its suture through the skin to which it was sewed and had been sucked into the pleural cavity. The loss of the drain-tube necessitated the completion of the operation first planned, viz., resection of a portion rib, and larger drainage, with incidental recovery of the lost tube. The next day, May 23, the eighth rib in mid-axillary line was exposed, the periosteum and pleura were separated from it, and three inches of its length was resected. The pleura was then opened and the pleural cavity flushed with hot saline solution. During the irrigation the lost tube washed into the opening and was recovered. A large dressing was applied, and the patient put to bed in good condition.

All went well for over three weeks. Drainage was free, asepsis was maintained, there was no temperature, and the patient gained strength. It then became apparent, however, that the lung was not going to expand, and that sooner or later we should be forced to resort to some means of obliterating the secreting cavity of the pleura.

Perthes' Method.—June 16 I installed a vacuum apparatus after the method of Perthes. Please observe that the chest had been opened one month, and that the lung had been compressed at least six weeks, before Perthes' plan was put in operation.

In assembling the essentials of the apparatus I was much assisted by Dr. Van Hook's's[1] report of his experiences in a similar case, though in many particulars I was compelled to depart from his suggestions.

Of the various air-pumps, run by water or electricity, I found none so easily applicable nor so efficient as the little suction apparatus which dentists employ to keep the mouth free of saliva during long dental operations and known as a saliva evacuator. Dr. F. H. Lee, D.D.S., kindly loaned me one of these instruments (Fig. 1), which I connected with a faucet in a bathroom near the patient's room. It was then connected by tubing, with a large bottle under his bed. This bottle was connected by tubing with an air-tight dressing over the wound (Fig. 2).

In making this air-tight dressing I tried to follow Dr. Van Hook's plan, using for drainage a stomach tube piercing and cemented to a large square of rubber-dam, the whole being held to the chest by adhesive straps and a large gauze dressing. I found it difficult, however, to have rubber-dam cemented to a tube so strongly that, after sterilization, it would not soon leak air. So I took the rubber parts of bicycle-tire valves, known to the trade as "valve-stems," and cemented them together, as shown in Figure 3, making virtually one tube with a wide flange. One end enters the chest, over the other the tubing going to the bottle is slipped, and to the flange rubber-dam can be fastened strongly. Some oxid of zinc ointment spread over the skin beneath the dam causes it to adhere and improves the air-tight character of the whole dressing.

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[1] The Journal A. M. A., May 30, 1903.

I did not experience the need for Perthes' complication of apparatus, mercurial manometer, etc., as my patient was at once able to tell how much negative pressure he could bear, and this was simply regulated according to his feelings by turning the stopcock of the water faucet. At first he could not endure strong suction; later, as the lung expanded, he bore a pressure which collapsed the tubing.

Result.—When the suction apparatus was installed the cavity of the pleura was apparently no smaller than when first opened. Six weeks had done nothing toward improving the outlook for eventual closure. Except high in front, one heard over the whole left chest the amphoric breath and voice sounds of general pneumothorax. Four days after Perthes' method was employed I began to hear normal breath sounds over the back, and a few days later over the front and sides of the chest. By July 4—less than three weeks—adhesions of lung and thorax had become so extensive that introduction of the tube was difficult. One month later the use of the apparatus was discontinued, a small sinus leading to a pocket holding not more than four ounces being all that remained of the cavernous space of the pleura. Meanwhile the general health improved, the patient gained flesh and strength, and in October he returned to his home in a distant town. The sinus closed soon after. He is now working at his trade as a mechanic.

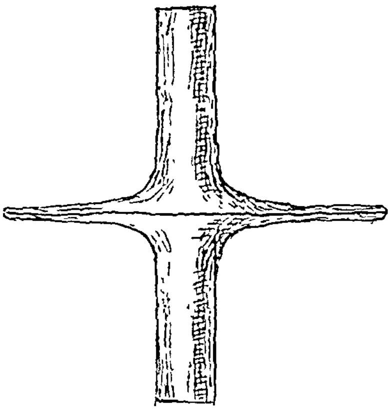

Fig. 3.—Valve stems cemented together.

Remarks.—It must be remembered that this method is not proposed for the cure of old chronic empyemas, in which the lung is compressed and immobilized by deposits of what may be termed pachy-pleuritis. But the published experiences of others, and my own experience in this case, lead me to place confidence in it for cases in which the lung fails to expand, yet is still expansible. Nothing in this method makes hospital care necessary. The details can be followed out in a private house. The only demand made on a home is that it contain a water faucet.

I once before knew of a drainage tube being drawn into and lost in the chest. In that case the tube had been transfixed with a safety-pin, but the exertion of coughing had torn the tube away from the pin and pulled it inside. It remained there and was never recovered. This was before the days of effective asepsis, and the patient, an old man, soon became exhausted by his discharge and died. I could not make out that his end was in any way hastened by the accident, but his recovery certainly would have been delayed or prevented had he lived. These cases have convinced me that neither transfixion with a safety-pin nor sewing to the skin, methods recommended by the surgical text-books, are trustworthy.

RESECTION OF MIDDLE TWO-THIRDS OF STOMACH WITH END-TO-END ANASTOMOSIS.*

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SAN LEANDRO, CAL.

Patient.—A carpenter, aged 57, weight 131, was admitted to the County Infirmary July 16, 1904, complaining of a tumor in the abdomen.

History.—Father died of old age. Mother died during confinement. One sister died of pneumonia. Two sisters and two brothers are alive and well. In 1870 he had typhoid fever; otherwise he has been strong and healthy. He does not use alcohol or tobacco.

Present Illness.—The present trouble began about two weeks ago, when he accidentally noticed a swelling in the region of the stomach a little to the left of the median line. He has had no pain or tenderness, and has felt the same as usual. During the past four years he has had a sensation of fullness after eating and has raised considerable gas; this latter symptom has not been confined to any definite period during the day. For the past week his appetite has not been so good as usual, but it is still quite fair. Bowels are regular and he sleeps well at night. He has lost from ten to fifteen pounds in the last four or five months. He feels very weak and can not work. He consulted Dr. Miller, San Leandro, who examined the tumor and advised him to come to the infirmary for operation. He never vomits, but he has had frequent attacks of water-brash.

Examination.—The patient is fairly well developed but poorly nourished. Nothing abnormal was found in the lungs. The heart is slightly enlarged to the left. The left border is in the mammary line. A loud systolic murmur is heard at the apex, transmitted to the axilla and back. The impulse is regular in force and rhythm. The liver extends from the sixth rib to the costal margin. The spleen is not palpable. The abdomen is slightly distended, but there is no tenderness. To the left of the median line and above the umbilicus a tumor can be felt apparently of about the size of a hen's egg. It is not tender on palpation. No difference in rigidity between the two sides of the abdomen can be determined. The urine is amber in color, specific gravity 1,030, solids 69.90, reaction acid, no albumin and no sugar.

Diagnosis.—Carcinoma of the stomach. An exploratory incision was advised, with further operation, if deemed advisable.

Operation.—July 21, in the presence of Drs. Miller, Browning, Condit and Irwin. After the abdomen had been prepared in the usual manner and the patient had been anesthetized with chloroform, a vertical incision about four inches long was made over the most prominent part of the tumor, down and through the peritoneum. As there were no adhesions the stomach was easily delivered through the wound for inspection. The growth was found to involve a large part of the greater curvature and the posterior wall of the stomach. Several greatly enlarged mesenteric glands were found along the lesser curvature well up on the esophageal end. The pylorus was in perfect condition. It was not considered advisable to try to remove the growth and to preserve the integrity of the stomach, as the organ would then have been left divided into two pouches with the opening in the partition at the top, so resection of the middle portion was decided on. The pylorus was separated from the body of the stomach by division between clamps to prevent any secretions from the stomach soiling the wound. The mesentery and omentum were also divided and ligated immediately. Clamps were placed as near the esophageal end of the stomach as possible and division made in the same manner as at the pyloric end; in all somewhat over two-thirds of the entire organ was removed. Considerable trouble from bleeding was experienced in removing several enlarged glands near the esophagus. In order to remove some of these glands it was necessary to sacrifice practically all of the lesser curvature remaining on the cardiac fragment of the stomach, leaving a double angular line of incision about four and a half inches long. In order to effect an anastomosis with the pyloric edge, which was a little less than two inches long, it was necessary to close the upper incision to within about two inches of the inferior border. This was done by a double row of Lembert silk sutures. The mucous membrane of the two ends to be anastomosed was brought together with a continuous suture of fine silk. The serous and muscular coats were next united by a double row of Lembert sutures completing an end-to-end anastomosis. Modified Mikulicz drains were then placed one above and one below the anastomosis and brought out through the abdominal wound, which was partially closed above and below with interrupted silkworm gut sutures.

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* Read at meeting of Alameda County Medical Society, Oakland, Cal., 1904.

Result.—Once during the night the patient vomited about two ounces of a brownish fluid. During the first twenty-four hours he received 1/5 grain strychnin sulphate hypodermically, 63 ounces salt solution subcutaneously, and 12 ounces nutrient enema consisting of peptonized milk 2 ounces, yolk of one egg, brandy 1 ounce, and normal salt solution 3 ounces. Because of seepage the outer dressing was changed that night.

This line of treatment was continued with slight modifications as necessary until September 6. On July 25, seven days after operation, hot water for the first time was given by the mouth, a teaspoonful every hour. On the day following barley water was substituted. The next day milk was given in teaspoonful doses. On July 31, or ten days after operation, broths were commenced, and then from day to day, malted milk, beef juice, peptonized preparations and egg nog were added until on August 26 he was given four raw oysters. Milk toast, crackers and cocoa were then gradually added and on September 2, forty-two days after the resection, he was given a small rare steak. This latter event, in my opinion, was of greater importance to him than the operation.

The convalescence was not without its complications, for on the sixth day bile was noticed on the dressings. and on the twelth day fecal matter was discharged through the wound. These two conditions continued for thirty-two days. The wound then rapidly filled up and on September 27, sixty-seven days after operation, he was discharged from the hospital. On the fourth and fifth days the temperature reached 100.2 F., which was the highest point attained. The highest white blood count. 8,400, was reached on the fifth day.

Subsequent History.—Dec. 12, 1904. Patient returned to-day to report. He weighs 139 pounds, this being a gain of eight pounds since July 16, the date of admission to the infirmary. There is present a very small sinus in the scar, which although closed for some time, reopened two days ago. His appetite is excellent, he is not distressed after eating, and, in fact, does not find it at all necessary to select particular articles of diet.

Remarks.—There are one or two points worthy of notice in this case. We had to deal with an extensive malignant growth involving a large part of the walls of the stomach, but not the cardiac or pyloric orifice, consequently there were no symptoms of prominence. An early diagnosis was made and an immediate exploratory incision was advised by Dr. Miller, his attending physician. We have here an example of what all our teachers, writers and workers so earnestly advocate in suspected malignant growths of the stomach—early recognition of the disease. and an immediate exploratory incision and further operation if deemed advisable.

SUDDEN DEATH FROM THE REMOVAL OF PLEURITIC FLUID.

EVERETT MINGUS, M.D.
MARSHFIELD, ORE.

Under ordinary conditions the removal of one-half of a pleuritic effusion is seldom attended with any risk, but the following case illustrates very clearly how removal of even this amount may be attended with rapidly fatal results and shows the necessity of proceeding cautiously in performing this simple operation when certain pathologic conditions are present.

Patient.—R. M., aged 27, weight 190, well nourished and good muscular development; occupation, laborer; family history negative.

History.—He had complained of poor heart action for 5 or 6 years. He had been treated by several physicians. About 18 months prior to his death he began to complain of a distressing dry cough, shortness of breath on exertion, general malaise and palpitation of the heart. He was again treated by a number of physicians for heart trouble until he came under the care of Dr. J. T. McCormac of Marshfield, who made a correct diagnosis of his case, viz.: pleural effusion extending to the third rib.

Diagnosis and Treatment.—Dr. McCormac, to confirm his diagnosis, withdrew about four ounces of the fluid with a small exploring needle and suggested tapping for a larger amount the following day. However, the condition of the patient was not so good and the matter was deferred. During the next three weeks the patient had considerable elevation of temperature, loss of appetite, distress in the thorax and his cough was worse, with scant expectoration. His condition then improved, and an additional amount of the pleuritic fluid was withdrawn, amounting to about 16 ounces. About two minutes afterward the patient complained of feeling faint; he was put to bed and immediately expired.

Autopsy.—Subject was well nourished. Heart was slightly enlarged and soft, valves normal. Twenty-four ounces of straw-colored fluid was in the left thoracic cavity. There were scattering adhesions, both old and recent, between visceral and parietal pleura. The pleura was considerably thickened and was the seat of numerous miliary tubercles. The entire left lung was dark from hemorrhagic clots and showed numerous rents in the walls of the blood vessels; it appeared more like a large blood clot than a lung. The whole left lung had lost its elasticity from long-standing pressure and tubercular processes and had become fragile so that when the outside pressure was relieved by the withdrawal of the pleuritic effusion it burst asunder on the admission of the arterial pressure. The walls of the blood vessels were the seat of degenerative changes; the intima was rough and the endothelial lining was broken in many places; muscle fibers of the media were cloudy and showed evidence of fatty degeneration; the adventitia was thickened and infiltrated with leucocytes. The pulmonary alveoli were filled with desquamated epithelium, blood and products of inflammatory exudate; the walls were ragged and compressed; the alveolar septa were infiltrated with round and spindle cells, leucocytes and red blood corpuscles. The respiratory bronchioles, peribronchial and interlobular connective tissue were studded with numerous tubercles and small caseous areas and broken-down elements of necrosis.

Remarks.—The rapidly fatal results and the pathologic findings in this case, I think, clearly demonstrate the necessity of searching carefully in old standing cases of pleural effusions for tubercle bacilli, and should they be found or should the clinical history of the case be such as to lead one to suppose that the etiologic factors are of a tubercular nature, tapping for the relief of the symptoms caused by the pressure of the fluid should be undertaken with caution.

A small quantity, perhaps from four to six ounces, should be withdrawn and the effect noted. In this case the removal of four ounces three weeks previous to the fatal tapping produced considerable reaction; elevation of temperature. rapid pulse and other unfavorable symptoms which disappeared as soon as the original amount was restored. If unfavorable symptoms develop after the withdrawal of a test quantity I think further tapping is contraindicated, provided the collection does not produce distressing or alarming dyspnea, and even under these urgent circumstances the amount withdrawn should be regulated with caution. Serous effusions in chronic tubercular processes of the lung act as a splint, giving support to the weakened vessels, limiting the respiratory movements on the affected side and keeping the parts at rest. The practicability of estimating the area involved and its extent in the presence of a large effusion is out of the question and the insidious manner in which many cases of serous effusion into the pleural cavity come on as a result of tubercular infection leaves one in considerable doubt as to the exact condition of the lung and the consequences of removing the fluid. A lung that has been long compressed undergoes degenerative changes not only from the diseased condition, but from disuse and from impaired blood supply so that its safety depends on the presence of the effusion in sufficient quantity to hold it together.

In this case no microscopic examination of the bronchial secretions was made prior to the autopsy. Tubercle bacilli were found on the free surfaces of the larger and smaller bronchi postmortem, and it is probable that they could have been found in the scant morning expectoration which the patient had. In this connection it is pertinent to remark that physicians are frequently deceived by the statement of patients in regard to the expectoration and coughing in the early stages of pulmonary tuberculosis; they invariably state there is no cough or expectoration when persistent inquiry will elicit the fact that there is slight cough in the morning, to which the patient attaches no significance or he terms it the "morning clearing." All cases of pulmonary tuberculosis begin in this manner, and when it is associated with other evidence of impaired health a careful and frequent examination of the sputum should be made. In tubercular affections limited to the pleura perhaps no bacilli would be found, but in miliary tuberculosis of the lung associated with small caseous areas careful searching will reveal them even in the presence of a considerable pleural effusion which compresses the lung and prohibits the free escape of bronchial secretion from the diseased area.

PRIMARY TUBERCULOSIS OF THE BLADDER.

S. WILLIAM SCHAPIRA, M.D.

NEW YORK CITY.

Patient.—N. K., stock broker, aged 36, was referred to me for cystoscopy and possible catheterization of ureters on account of frequent micturition during the past two years. Previous history is negative.

History.—About two and a half years ago the patient experienced a frequent desire to micturate by day, which was temporarily relieved by medicine and bladder irrigation. About four months ago, he suddenly developed epididymo-orchitis, which partially subsided in four weeks.

Examination.—I first saw the patient Nov. 9, 1904. His urine was turbid. After thorough irrigation of the bladder, I injected boric-acid solution and inserted a cystoscope, with two catheters attached. I found a sore as large as a five-cent piece at the apex of the trigonum, a smaller one about one-half inch to the left, and a number of disseminated tubercles on either side of the trigonum.

The mouths of the ureters looked healthy. I passed the catheters into each ureter for about two inches and collected clear urine from both kidneys, in contrast to the turbid urine from the bladder. The testes and epididymis were tubercular, that is, there was a tubercular epididymo-orchitis, in which both cords were involved. The prostate was slightly enlarged and sensitive. On massaging, I squeezed out some prostatic fluid, which was sent to be examined microscopically. The patient at this time complained of frequent urination by day and night and of very severe pain in both testes.

Diagnosis.—The three specimens of urine, i. e., the first turbid urine from the bladder and the two clear specimens drawn from the ureters were given to his physician for chemical and microsopic examination, and he was asked to make repeated microscopic examinations of the patient's sputa and to let me know the result, as my diagnosis of the case was tuberculosis of the bladder.

Microscopic Report.—In a few days his physician reported that the bladder (first) urine contained numerous quantities of tubercle bacilli and that the specimens drawn from both ureters were normal and perfectly clear and contained no bacilli. Sputa examination: No tubercle bacilli. Prostatic fluid: A number of tubercle bacilli.

Treatment.—Nov. 12, 1904: The patient complained of severe pain in both testes. I again examined his bladder with the cystoscope and catheterized both ureters, with the same result. I advised him to have both testes and cords removed, which was done on Dec. 21, 1904. All contained tubercle bacilli.

Remarks.—I report this case because I have found no case fully reported as primary tuberculosis of the bladder. Pathologists are divided as to the initial lesion, some claiming that it is in the testes, while others hold that it is in the kidneys. In this case it is clear that the kidneys and ureters were perfectly healthy, and that the bladder symptoms preceded the symptoms of the testes, prostate and vesicles by nearly two years. Taking into consideration the fact that the patient was robust and in good health up to two and a half years ago, and that his father, mother, brothers and sisters are in perfect health, I can not but conclude that it is a case of primary tuberculosis of the bladder, followed by extension of the disease to the prostate, vesicles, testes, epididymis and cords.

64 Rivington Street.

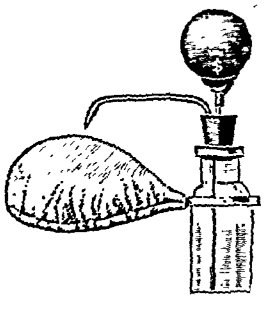
New Instrument

A NEW CHLOROFORM INHALER.

FREDERICK T. WRIGHT.

DOUGLAS, ARIZ.

I have devised a "one-handed" chloroform inhaler, a sketch of which is given herewith, for use especially in obstetrical practice. A rubber cork, pierced by two metal tubes, is inserted into a wide-mouth bottle of about two ounces' capacity. One of the tubes extends just beyond the bottom of the cork and is connected at its upper end with a rubber bulb. The other tube extends to the bottom of the bottle; its outer portion is curved so that its extremity, drawn out to a very fine point, looks downward. An ordinary mask is attached to the bottle by a spring collar, being placed nearer the bottom than is shown in the illustration. By intermittent compression of the rubber bulb a very fine stream of chloroform is projected on the mask; the amount can be regulated at will. The bulb, bottle and mask are easily taken apart and packed into a compact bundle, which occupies very little space in an obstetrical bag.



The advantages of the apparatus are obvious. In the majority of obstetrical cases, especially in country practice, the physician is obliged to be his own anesthetist; with this device held in one hand, he can administer chloroform accurately and efficiently, following with ease any movements of the patient's head; at the same time his other hand is left perfectly free to "support the perineum" or for such other maneuvers as may be necessary.

Talent.—If the power to do hard work is not a talent, it is the best possible substitute for it.—*James A. Garfield.*

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A NEW CONTRIBUTION TOWARD THE SOLUTION OF PROBLEMS IN TUBERCULOSIS.

Especially within the last few years many ideas have been advanced which tend to shake long-cherished views concerning the spread of tuberculosis. Many of these ideas have been so directly at variance with accepted teachings that they probably would have received little attention if they had not been advanced by men of high international reputation. We refer to such theories as that of Koch, advocating the rarity of transmission of bovine tuberculosis to man; to that of Baumgarten, maintaining that most cases are of congenital origin; and to that of Behring that the disease usually is contracted in early extrauterine life and through the intestinal tract. The two latter views, as well as Ribbert's, that what apparently is primary pulmonary tuberculosis often is due to secondary deposits of tubercle bacilli by the blood stream, naturally tend to minimize the rôle of air infection and to lessen vigilance in guarding against such infection; just as a general acceptance of Koch's views would tend to relax measures to exclude the use of milk and meat of tuberculous cattle. Whatever their merits, these ideas have powerfully stimulated research in all fields which offer problems bearing on tuberculosis.

Other phases of the problem, especially the frequency and primary localizations of the disease in early life, the possibilities of prolonged latency (which would be essential if Baumgarten's or Behring's theories are correct), the relative frequency of primary invasion of the respiratory and digestive systems, particularly of the lymph nodes connected with them, have recently been studied thoroughly by Professor Harbitz[1] of Christiania, who carried on systematic work on autopsy material for a number of years. Some of the facts brought out by Harbitz merit special notice. Particular attention was given to autopsies in children (under 15 years). In 42.5 per cent. of 275 children, tuberculosis in some form was demonstrated. This high percentage is largely due to the fact that the lymph nodes were examined with great care both macroscopically and microscopically. Most noteworthy is the demonstration of latent tubercle bacilli in the nodes of 18 children under 11 years of age in whom painstaking examination revealed no evidence of tuberculous lesions. The presence of bacilli was shown by inoculations of guinea-pigs. Not less than 10 of the 18 children were under 1 year of age, and in 13 the bacilli were found in the cervical nodes only, in 3 cases in the thoracic, and in 3 in the abdominal nodes. This naturally suggests questions as to the virulence of latent bacilli and the possible duration of the latency, and these questions merit further study. Harbitz considers it plausible that latent bacilli frequently are less virulent than usual; he concludes that a latency of several months seems probable, while one extending over several years is not probable, as claimed by Baumgarten. The latter's claim of the frequency of intrauterine infection is consequently not substantiated by Harbitz, who, however, like Warthin and Cowie, believes that this mode of infection is of greater importance than is generally supposed. That great care must be taken in excluding postnatal infection is shown by the fact that Harbitz found extensive caseous tuberculosis in a child 2 months old, who undoubtedly had contracted the disease from the father after birth. Similar cases occur in the literature. These cases emphasize the great rapidity with which the disease may spread in the body of the infant. From the facts now available, it may be concluded that it is unlikely that a child infected with tuberculosis after birth should die of tuberculosis before the age of 4 weeks, but that it may die of postnatal infection when 8 weeks old, and probably even when only 5 or 6 weeks old.

Harbitz made a painstaking study to determine the primary localization of the disease. How difficult this is, how insufficient the ordinary routine autopsy methods are for the purpose is shown by the many peculiar routes which the infection may take. In 14 cases of localized tuberculous inhalation bronchopneumonia, Harbitz found that the inhaled material had come from the rupture of tuberculous bronchial nodes into the bronchus, about the terminal ramifications of which the tuberculous pulmonary changes were localized; these cases really were instances of primary infection of lymph nodes. Indeed, it would seem that in children, as a general rule, the lungs, when involved, are infected from the lymph nodes; for tuberculosis of the tracheobronchial nodes without involvement of the lungs is common in children, while the reverse is rare. From these nodes the infection of the lungs most frequently takes place in the manner just described, though a retrograde transport by the lymph channels is quite frequent. In 117 autopsies in children, Harbitz found that in 41 per cent. the disease was primary in the respiratory tract (including the tracheobronchial nodes), and in 22 per cent. in the digestive tract (including the tonsils, cervical and abdominal lymph nodes). In 9.4 per cent. there was a general lymphatic tuberculosis, while in the remainder the location of the primary lesion was more or less uncertain. In connection with tuberculosis of the digestive tract, attention is called to the difficulty of determining whether the infection is due to bovine bacilli taken with the food or to inhaled bacilli mixed with the food. The large number of cases of latent tubercle bacilli in the cervical nodes as compared with the mesenteric points to greater danger of infection through the throat than through the intestines. While the different groups of lymph nodes sometimes are infected separately and occasionally, no doubt, by way of the blood, it seems likely that much more frequently the infection spreads from one group to another by way of the lymphatics. Extension upward and downward from primarily infected nodes in the chest appears most frequent, but descending infection from the cervical nodes and tonsils is also quite common; ascending infection from the mesenteric nodes seems more frequent than is commonly supposed. The determination of the primary point of infection is rendered difficult by the fact that we can not exclude the possibility that tubercle bacilli may pass through the intestinal mucosa and one or more groups of lymph nodes before they become stationary and set up inflammation. Feeding experiments on animals[2] have also shown that after the ingestion of tuberculous material the nodes in the chest may be first attacked, and bacilli have been found in the thoracic duct shortly after feeding.

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[1] Jour. Infect. Dis., 1905, vol. ii, No. 2, pp. 143-237.

Careful consideration is given by Harbitz to the frequency and localization of tuberculosis in adults. When all tuberculous changes in his series are represented by one curve, it begins with 72.5 per cent. at the ages between 16 and 20, then it sinks to the forties, and rises rapidly in the sixties, where it reaches 90 per cent. The latter high figure is, of course, due to the frequency of healed and latent lesions. These figures, however, are not so high as those reached by Nägeli (97-98 per cent.) and Burkhardt (91 per cent.), largely because Harbitz does not consider the presence of mere apical pleural adhesions or of thickened patches in the pleura over the apices or of small pleural scars in the pleura and lungs as sufficient evidence of former tuberculosis as Nägeli[3] did.

In adults, Harbitz found primary tuberculosis of the digestive tract in 5.5 per cent. of all postmortems; in 7.7 per cent. of all cases in which there was tuberculosis, and in 18 per cent. of all cases in which tuberculosis was the cause of death. In adults the disease was primary most commonly by far in the respiratory tract, but here also pulmonary tuberculosis quite frequently may arise by hematogenous infection from more or less remote foci, most frequently in lymph nodes. Ribbert, probably, goes much too far in considering this the rule. Harbitz emphasizes, however, the importance of careful inquiry into the early history of tuberculous patients, with special reference to enlarged lymph nodes in childhood. The fact that of 800 "scrofulous" children discharged from a Danish hospital no less than one-third had died of, or were suffering from, active tuberculosis, chiefly pulmonary, 10 years later indicates that progressive tuberculosis often starts in enlarged nodes in childhood.

The facts presented in this review show that the problems of invasion and localization of tuberculosis continue to yield valuable results when subjected to critical study by modern methods. Studies like the one here reviewed serve as starting points from which new investigations into various special problems may depart. It is evident that ordinary superficial and routine methods no longer suffice for progressive work in these problems. Painstaking work by means of anatomic and bacteriologic methods, coupled with abundant animal experiments, preferably, of course, on material with full clinical records, is the only way by which our knowledge of these questions can be actually furthered.

THE EARLY RECOGNITION OF INSULAR SCLEROSIS.

It is well known that hysteria may simulate almost any form of organic disease of the nervous system, and that the differential diagnosis is by no means always easy. The difficulty is in nowise lessened by the fact that the two varieties of disease may be associated in the same patient. Of the numerous affections of the nervous system, none perhaps exhibits greater variability in symptomatology than multiple cerebrospinal sclerosis, and that this should be so will be easily understood from the nature and distribution of the lesions. In an interesting and instructive paper dealing with the early symptoms of insular sclerosis, Dr. E. Hobhouse[1] takes the ground that hysteria is not rarely the prelude to this affection, and he states that it is exceedingly difficult in some cases to say where the one ends and the other begins, the disease often extending over a long period of years, so that it may be impossible to obtain a continuous clinical history.

The importance of making a correct diagnosis as early as possible resides in the application of appropriate treatment. Difficulty in this connection arises from the great diversity of the symptoms of multiple sclerosis, of which but few may be present throughout a considerable period of time at the outset. Many patients complain at first of weakness in the lower extremities or on one side of the body or in one member; in others, tremor appears early; and, in still others, ocular symptoms may be the initial manifestation. The motor symptoms, as a rule, are transitory and are often associated with sensory phenomena. Vomiting may occur in the form of a crisis. Not rarely the sphincters are involved. In women, menorrhagia has been observed in some instances. Tinnitus aurium has also been noted occasionally and it may appear early; aphonia likewise may occur as an early symptom.

The diagnosis of multiple sclerosis is easy enough in the presence of the classical symptoms, namely, intention tremor, scanning speech, nystagmus, spastic gait, and increased knee-jerks, but often the clinical grouping is incomplete. Especially the transitory character of the symptoms and their sudden appearance and disappearance are suggestive of hysteria and only the further course of the disease will at times clear up the doubt. In many instances, moreover, the patient is emotional, is readily moved to tears or to laughter, and the voice has a tremulous character. A symptom of profound differential significance is the toe phenomenon of Babinski, which is probably never present in the absence of organic disease of the nervous system.

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[2] Weber and Bofinger: Tuberculose Arbeiten aus dem Kais. Gesundheits. 1904, No. 1, p. 83.

[3] Virch. Arch., 1900, No. 160, p. 426.

[1] Lancet, Feb. 18, 1905, p. 411.

Even anatomically there may be doubt as to the condition present, for cases have been placed on record in which during life symptoms of multiple sclerosis have been present, while after death only induration of the brain and cord have been appreciable macroscopically, although an increase of neuroglia tissue has been detected microscopically. One must be exceedingly cautious, therefore, in making a diagnosis of hysteria, when one or more symptoms of insular sclerosis are present.

SYPHILOPHOBIA.

One of the important factors in the reduction of the mortality from tuberculosis has undoubtedly been the gradual obliteration of the conviction that used to be so prevalent, that this disease is incurable. As the result of the persuasion that cure is not only possible, but even probable, if the affection is seen in time, many a tuberculous patient has taken heart and by auto-suggestion has helped on his treatment very materially. There is at least one other of the infectious granulomata in which a corresponding hopefulness in the therapeutics of the disease would do much to lessen the severity of the symptoms and undoubtedly would help to prevent the occurrence of some of the more serious sequelæ. Professor Fournier of Paris, certainly an authority on syphilis, has recently declared that sufferers from this disease who have their initial lesion on the finger are more likely to suffer from severe general symptoms than are those whose affection begins with a genital chancre. Other observers have called attention to the same fact. Fournier explains it by saying that those who acquire syphilis extra-genitally are often physicians or members of the intelligent classes who know the character of the disease and who are accordingly very much depressed by having acquired it. The lowering of resistive vitality by worry makes the course of the affection much more severe than it would otherwise be.

The same state of affairs has been noted in other ways. For instance, in large cities there is an impression that not a few of those who develop general paresis after syphilis practically worry themselves into their mental affection. For example, a young man, having been told by his physician that he has syphilis, may proclaim at once that he knows that he will surely develop paresis, because he knows of several who acquired syphilis, and who are now under treatment for paresis. The mental strain and nervous tension incident on the ever-haunting presence of the awful phantom of an incurable constitutional disease is likely to undermine his mental and physical makeup.

It is quite probable, however, that the prognosis of syphilis is by no means so bad as the present impression which prevails with regard to it would seem to indicate. According to the best available statistics, probably not more than 10 to 15 per cent. of syphilitic patients ever suffer from visceral complications. There is no doubt, according to the testimony of well-known and conservative specialists, that the severity of syphilis has been very much modified in recent years and that the most hideous tertiary manifestations are now seldom seen. With regard to the nervous system the outlook is even less discouraging. Probably less than 3 per cent. of all syphilitic patients ever have any serious affection of their nerve tissues and less than 1 per cent. suffer from general paralysis or locomotor ataxia.

With regard to the severer forms of nervous syphilis, it has been pointed out that only those who overwork and overworry or who were originally of lowered nervous vitality are likely to be sufferers. With regard to general paralysis particularly, overwork or emotional strain, or alcoholism, or sexual excess is the immediate factor in almost every case. Under these circumstances it would seem that there is need of a reaction of sentiment that will make the awful possibilities of syphilis somewhat less likely to interfere with nature's curative efforts than is at present the case. While the moral influence of the possibilities of the affection and the deterrent virtues of proper knowledge will not be lessened, at the same time the exaggeration that may so easily do serious harm should be eradicated so as to give resistive vitality its proper opportunity. After all, there are not a few competent syphilographers who consider that they have seen cases of second infection with syphilis; that is, that from ten to twenty years after an undoubted first attack of the disease and immediately following a prolonged period of cessation of all symptoms, they have seen a second initial lesion followed by all the usual symptoms of renewed secondary syphilis. This would seem to indicate that the first attack of the disease had been overcome and that the immunity produced by it had disappeared, demonstrating the curability of syphilis in certain cases.

THE TREATMENT OF PLEURAL EFFUSION BY PARACENTESIS.

Under ordinary conditions the pleural cavity, representing an enormous lymph sac, contains only a small amount of fluid, which escapes from the blood vessels and is carried off by the lymphatics. If for any reason, such as vascular or circulatory insufficiency, a greater amount escapes from the blood vessels, or, as in the case of inflammation of the pleura, a lesser amount is taken up by the lymphatics, fluid will accumulate in the cavity. The mere presence of a considerable amount of fluid tends to obstruct its circulation. The movement of the fluid is largely dependent on the activity of the lungs and is, therefore, lessened when pulmonary expansion is interfered with from any cause. Under the conditions stated paracentesis becomes necessary in order that the function of the several structures shall be resumed.

The indications for this procedure are discussed at some length in a recent paper by Dr. Samuel West.[1] When the pleural cavity is filled with fluid and the respiratory movements are abolished, paracentesis should be performed without delay, while a small effusion should be tapped if it has existed for some time and exhibits no tendency to disappear. Immediate paracentesis is indicated when, in consequence of failure on the part of the heart and the lungs, dyspnea sets in suddenly, without premonition, and rapidly becomes urgent, so that suffocation appears imminent.

In the opinion of Dr. West, siphonage constitutes the best means of evacuating a pleural effusion. For this purpose an ordinary trocar and canula, connected with an India-rubber tube reaching to the floor, can be employed. The free end of the tube should be immersed in sterile water to avoid aspiration of air. The negative pressure thus established is sufficient to permit the escape of as much fluid as can be safely removed. Dr. West considers the use of the aspirator unnecessary and attended with risk. Paracentesis may be repeated if the fluid reaccumulates, but after a time some more radical procedure will be required. Free incision of the chest is rarely indicated. It necessarily leads to empyema, but this may be more readily cured than the recurrent serous effusion. The operation should be performed only when the lung is free from adhesion and capable of expanding readily.

In the presence of empyema the pus should be evacuated without delay. Ordinarily, incision and drainage will be required, but occasionally paracentesis by means of an aspirator will suffice, at least temporarily. In making the incision a needle should first be introduced and if pus be found the needle should be used as a director. Generally, the preferable site for incision is just in front of the postaxillary border on a level with the nipple. Resection of a rib should be practiced only when necessary to provide free drainage. An oval opening may be made between the ribs, and two small drainage tubes introduced. When the pus is curdy, flaky or offensive, or if it contains blood clots, recovery will be greatly accelerated by irrigation.

In the presence of pneumothorax tapping may be indicated immediately after the development of the condition or after effusion has taken place. The apparatus used for siphonage is usually sufficient for this purpose. If repeated paracentesis fails to afford relief, free incision may be practiced under these conditions also.

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[1] Lancet, March 25, 1905, p. 787.

THE SENATE PLOT AGAINST PURE FOOD.

In a paper in May *World's Work* entitled "The Senate Plot Against Pure Food," Edward Lowry says: "A pure-food law will be introduced immediately after the opening of the next session of Congress, and its friends will put aside all other legislative business until their pet project has come to a decisive vote." In addition, he presents facts to spur us to every effort to see that there are enough votes to pass the bill. Opposed to the bill in the Senate were Aldrich and Wetmore of Rhode Island, Hale and Frye of Maine, Kean of New Jersey, Penrose of Pennsylvania, and some southern senators. The Illinois and Michigan senators straddled. Mr. Lowry gives some explanations of the action of the opposing senators, and one anecdote we must quote in full:

"One afternoon at a hearing before a committee of the national House of Representatives a man in the rear of the crowded chamber came forward and asked to be allowed to speak on the bill under consideration. Apparently, none of the lawyers or representatives of manufacturers who were present knew him.

"'Whom do you represent?' asked the chairman of the committee.

"'The people,' was the unexpected response.

"'What people?' asked the chairman, incredulously.

"'The people of the United States.'

"The congressmen burst into open laughter.

"'I am sorry that we can't spare you any time,' began the chairman, curtly. 'We have a number of gentlemen here representing special interests affected by this bill, and we must devote what time we have to them.'"

The medical profession is not a "special interest" by any means, but the next Congress will find that medical men are especially interested in the attitude of every senator and representative toward the pure-food movement. See your senator and congressman this summer and plainly state that you expect them to vote for pure food. The "special interests" are active every minute and they have great resources and much influence. The field staff of our campaign is ready and equipped for the fray. It merely remains for each one of us in the ranks to do his duty.

SMOKE.

The crusade against unnecessary city smoke is more social than medical, and yet has a real interest for physicians. The direct harmfulness of smoke to the human organism is not wholly clear. It is certain, however, that smoke and other products of soft coal combustion vitiate the atmosphere and constitute an influence genuinely depressing to the organism. The skin and mucous membranes suffer and, in children especially, there is deficient oxygenation with anemia. To maintain the best health, city-dwellers seek for a time each year the soot-free air of the country. All forms of life, man included, are dependent on the sun's rays for their greatest activities. In the city whose sunshine is much of the time absorbed by a fall of coal smoke, child life is under average, and the children who can not for a time get out to the sunlit open country tend to be pale and flabby. In its economic aspect smoke annually causes great loss, and this feature of the nuisance enables the sanitarian to appeal for assistance to the commercial interests in efforts to give our cities clear atmosphere. In an address[1] before the Woman's Club of Cincinnati, Dr. Charles A. L. Reed, chairman of the Committee on Medical Legislation of the American Medical Association, effectively turns to a new and powerful source of aid in the antismoke campaign—the women. Smoke-filled air imposes extra and unnecessary drudgery on the housekeeper. Woman's privilege to wear clean clothing is ruthlessly disregarded by the makers of smoke and the permitting municipalities. Reed urged women, individually and through their organizations, to protest vigorously against present conditions. Moral dirt also is close kin to physical dirt, and a clean community has the better chance to avoid degeneracy. The ill conditions are national and not local, so that something more than local effort is needed to combat them. Therefore, he proposes co-operation, national in extent, to create public sentiment, to determine the facts and adjust conflicting interests, to demonstrate plans and appliances for smoke prevention, and to formulate a standard law to secure uniform regulation of the evil all over the country. Promising the co-operation of the American Medical Association, he suggested a "national antismoke convention" to execute these plans, this convention to be really representative of all concerned interests and to be instructed by competent specialists, engineers, physicians, sanitarians, manufacturers, attorneys, and others. The assistance of the press must be secured. The suggestion appears feasible, and it is to be hoped that it will be carried out.

INTERURBAN CLINICAL CLUBS.

Dr. Osler's suggestion[2] in regard to the formation of interurban clinical clubs in different sections of the country undoubtedly receives the hearty approval of the progressive teachers and clinicians. It is self-evident that sincere, thorough work of the kind suggested will help to promote interest in the teaching and investigation of internal medicine. Certain changes, more particularly by the way of additions, should be made in the grouping suggested by Dr. Osler. Of course, Ann Arbor must not be omitted. Detroit and Milwaukee should be considered. Places like Iowa City, in which some effort has been made to build up good clinical work on permanent and adequate basis, should not be forgotten. The men in small, isolated places of this kind, in particular, need the education and stimulus of the clinical club. In the Middle West many state universities have established or are establishing medical departments which are bound to stay, no matter whether the university is located in a small town or in a large city. These departments are entrusted with great responsibility in the matter of teaching medical students, and there is great need for all influences that tend to raise the quality of their teaching, and especially, we believe, of the teaching of clinical medicine. Therefore it is hoped, if Dr. Osler's suggestion takes practical form, that great care be used to secure, by wise grouping, the greatest possible influence on medical teaching and investigation.

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1. American Medicine, April 29, 1905, p. 703.
2. Correspondence department, this issue.

THE WAYS OF THE ANTIVACCINATIONISTS.

Antivaccination methods are shown up in a recent communication of Dr. R. N. Willson, Jr., to the Philadelphia *Public Ledger*. It appears that the secretary of the Constitutional League of the United States, apparently an antivaccination society, has been sending out circulars, one of which is made up in part of extracts from articles by Dr. Willson.[1] These extracts, however, are so selected and arranged as completely to misstate the author's ideas and to represent him as an opponent to vaccination. Such passages as would give the real opinions and direct statements of Willson's views on the subject and his conclusions from his studies are carefully omitted, and the whole article is therefore practically a forgery, as attributing views to the person quoted which are exactly the opposite of those held by him. Antivaccinationists, like zoophilists and other *soi disant* philanthropists, while claiming to be actuated by the highest motives, appear to have very little regard for truth and common honesty, as in this example thus exposed by Willson. Lacking decent arguments for their cause, they appear to think any kind of method justified. The kind of literature they favor is well represented by the circular complained of by Dr. Willson.

PREMENSTRUAL PREGNANCY.

It is generally admitted that ovulation and menstruation, while coincidental, are not interdependent, the former, in fact, occurring periodically for some time prior to puberty, while the latter constitutes the final sign of sexual maturity. Accordingly, impregnation may take place before the advent of menstruation, and instances of this character, while unusual, can not be considered as extraordinary. Dr. A. W. Addinsell[2] reports that a 13-year-old girl was delivered of a 7-month's still-born child, although she had never menstruated or previously had presented any other outward sign of sexual maturity. He also refers to the case of a girl who gave birth to a child at the age of 9 years and to similar cases in girls of 11¾, 12 and 12½ years, but who had previously menstruated. He further calls attention to the fact that maternity before the advent of menstruation is not uncommon in Central Africa and in certain districts in India. Dr. Addinsell compares menstruation to a pathologic process, and he believes it probable that primitive woman never menstruated, at any rate not as menstruation is understood to-day.

AUTO CASUALTIES.

The automobile is becoming an important element in our civilization. The record of accidents from its use is becoming appalling. Since January 1 there are said to have occurred in New York City and vicinity no less than seven hundred and ninety-three automobile casualties, sixty-two of them fatal and over sixty more rendering their victims cripples for life. If this can happen in one city it is not pleasant to think of the possibilities for the whole country. We do not vouch for

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1. American Medicine, Dec. 7, 1901, and The Journal A. M. A., May 3 and 10, 1902.
2. London Lancet, March 25, p. 791.

the figures—which would seem to justify a popular uprising—but, even if exaggerated many fold, they demand action. Much of this record, if not all of it, may be credited to high-speed automobiling, and there seems to be a tendency among chauffeurs, unconsciously it may be in some cases, to take excessive risks in this particular way. Many who are arrested for going beyond the speed established by law indignantly claim, but with apparent sincerity, that they have kept well within the limits, though the facts are all against them. The newspapers have spoken of a sort of automobilimania or speed intoxication to which automobilists are specially liable. Whether such exists or not, it is certain that men supposed to be honorable citizens in other respects are all the while imperiling the lives of their fellowmen, to say nothing of their own, by reckless speeding on the public highways, and this apparently without any conscience or scruples. One New York millionaire is reported to have thirteen accidents to his credit, two of them fatal and nine causing permanent injury. As physicians are beginning to use automobiles very largely, we hope and trust that our profession will keep its record clean in this matter.

THE TENDERFOOT EXODUS FROM PANAMA.

Some of the newspapers are rather hard on the considerable number of clerks and others who went to Panama without due consideration of the conditions and who have fled from the isthmus because of the recent scare from the yellow-fever situation. One paper, noting the complaints of the "tenderfoot" clerks, remarks that they offer no real facts that were not known before and entirely accessible; for example, they found that the region of the equator is hot—naturally—one of the things they should have realized before they went. That these men would soon find that work at the isthmus is not a sinecure at a watering place was to be expected, as we mentioned in these columns not long ago. Their charges of mismanagement, however, should be investigated, as conditions on the isthmus need all possible amelioration. Even if all employes could be men who had been seasoned by previous work in the tropics, they need every possible protection. The report of Colonel Gorgas shows that already an enormous reduction in mortality and morbidity rates has been effected in spite of the many hindrances to effective work in the beginning, which have been mentioned. The yellow-fever scare will weed out the adventurers and those who thought they were entering on an easy political job. It will also spur the officials to use every possible precaution to protect the inhabitants of the canal zone.

THE PATENT MEDICINE EVIL.

Elsewhere in this issue we print a communication from Mr. Bok, editor of the *Ladies' Home Journal*, which is both an indictment of and an appeal to the medical profession. The criticism is a just one. No one knows better than the physician the wreckage caused by the indiscriminate use of patent medicines, and it naturally follows that the profession should take the lead in the fight against them. And in reality it has done so, —although individually and spasmodically it is true— but with what result? Opposition on the part of newspapers, some of which could not exist if it were not for the patent medicine advertisements, and on the part of the "vested interests" affected. And the main answer to the charges made by physicians was that they were based on selfish motives, that patent medicines cured those who would otherwise go to physicians, and consequently the income of the latter suffered. It has been useless to say—what is a fact—that the use of patent medicines is detrimental to the health of the people, and increases, not decreases, the number of those who have to consult physicians. Of course such opposition was to be expected, but most of the few who took up the fight in the past soon became discouraged and gave up, instead of determinedly sticking to it, realizing that every reformer's path is full of thorns. Mr. Bok has made the alcohol question the basis of his crusade, but physicians know that this is only one of the evils. The intemperance that results is insignificant compared with the other physical injuries that develop from the indiscriminate and ignorant use of potent drugs. It is certainly encouraging that a layman has now taken up the matter in the practical co-operative manner which is suggested, and we can assure Mr. Bok that physicians everywhere stand ready to aid him by deed as well as by word.

Medical News

ILLINOIS.

Thousands for Hospitals.—The hospital bazaar held at Aurora will net at least $6,000 for the institutions which are to be beneficiaries.

Feud.—Dr. Wesselius Davis, Wapella, who had had trouble with Truman Mason for a long time, was shot in the back by Mason and seriously wounded, May 11. Mason thereon shot himself through the heart.

Chicago.

Deaths of the Week.—For the week ended May 13, the mortality was at the annual rate of 11.79 per 1,000. There were 450 deaths, of which 62 each were due to consumption and pneumonia; 49 to heart diseases; 42 to Bright's disease, and 36 to violence.

Smallpox.—During the week ended May 13, 33 smallpox patients were removed to the Isolation Hospital, and one death occurred. On May 16 there were 85 patients at the hospital. Of the new patients not one had been revaccinated, and 20 had never been vaccinated. There were school children in attendance on false certificates of vaccination, and 5 were children under school age.

A Notable Reduction.—The reduction of the death rate for the last 20 years is shown graphically by the Bulletin of the Health Department. For the first decade, 1885 to 1894, the death rate at all ages was 20.2 per 1,000; for the second decade, 1895 to 1904, the death rate was 15.1 per 1,000, a reduction of 25.3 per cent. The reduction of the death rate for children under five years of age is still more striking: For the first decade the death rate per 1,000 was 9.5 per 1,000; for the second decade, 5.1 per 1,000, a reduction of 46.3 per cent.

INDIANA.

Unlicensed Practitioner Fined.—A. A. Bancroft, an employe of a patent medicine company, was fined $25 and costs at Indianapolis, for practicing medicine without a license. He claimed that he was acting simply as a "demonstrator."

Made Sick by Tuberculous Milk.—A family in Noblesville complained that the milk from their new cow made them sick. Pus and tubercle bacilli were found in the milk and subsequently local tubercle lesions were found in the cow's bag.

April, 1904. There were 432 deaths of infants under 1 year of age; 171 deaths of children aged 1 to 4 years, inclusive, and 934 deaths of elderly persons over 65 years. A marked diminution appears in the deaths of infants under 1 year. Important causes of deaths were as follows: Tuberculosis, 277; typhoid fever, 38; diphtheria, 24; scarlet fever, 10; measles, 15; whooping cough, 7; pneumonia, 228; meningitis, 57; influenza, 72; cancer, 140; accidents and violence, 147, and smallpox, 4. A slight increase appears in the mortality from typhoid fever, and a considerable decrease in the number of deaths returned from pneumonia and influenza. Meningitis caused 57 deaths during the month, as compared with 54 for March.

MISSOURI.

College Elects Officers.—Central Medical College, St. Joseph, has elected Dr. Thompson E. Potter, president; Dr. William T. Elam, secretary, and Dr. O. Beverly Campbell, treasurer.

Resign from Fulton Hospital Staff.—Dr. James W. Smith, superintendent of Hospital for the Insane, No. 1, Fulton, and the entire staff of assistant physicians resigned, May 10, to take effect June 13. The assistant physicians are Drs. Z. T. Martin Lathrop, William Bayliss Clarence, and J. F. Harrison, Benton City. The reason given for the resignation of the superintendent is ill health. The assistant physicians resigned so that the board might be free to choose a superintendent and staff satisfactory to all concerned.

Alleged Irregularities in Examination.—Dr. Vilray P. Blair reported at the meeting of the St. Louis Medical Society that a committee of the State Board of Health had investigated the charges made that there had been irregularities in the last examination held by the board for the issuance of licenses to practice medicine in this state, to wit, that there had been wholesale cheating on the part of the candidates. No action was taken by the society because it was stated that the whole matter has already been referred to the governor.

Personal.—Dr. John E. Lopp has succeeded Dr. Gustave Ettmueller as physician of Jefferson City.——Dr. Eugene Carbaugh has succeeded Dr. Walter S. Wheeler as inspector of contagious diseases at Kansas City.——Drs. Marshall A. Smith and Charles Pipkin have been appointed members of the Board of Health of Gallatin.——Dr. Carl A. Jackson has succeeded Dr. Robert P. Waring as health officer of Kansas City.——Dr. L. M. Thompson, superintendent of Missouri Colony for Feeble-Minded and Epileptics, Marshall, has resigned.——Dr. Walter C. Overstreet, Sedalia, sails for Europe next month.——Dr. John M. Langsdale, retiring city physician of Kansas City, was presented with a gold-headed cane by the medical staff, nurses, internes and employes of the City Hospital, April 23.

St. Louis.

Graduating Exercises.—At the annual commencement exercises of the Marion Sims-Beaumont College of Medicine, May 8, a class of 103 was graduated.

Personal.—Dr. Charles J. Orr has been elected treasurer of the St. Louis Medical Society.——Dr. Stanley D. Francis was struck by a street car in East St. Louis, Ill., April 24, and dragged fifty feet, but was not seriously injured.

Transmission of Variola.—A woman died in this city about two weeks ago; her burial certificate gave the cause of death as bronchitis and pulmonary hemorrhage. The body was embalmed and shipped to Indianapolis for burial. Advices from Indianapolis state that the undertaker who took charge of the body there became infected with hemorrhagic smallpox, that a number of people who attended the funeral have taken smallpox, and that about one hundred and fifty persons who were near the body are under quarantine. Since these advices came to St. Louis, the undertaker who embalmed the body here was seized with hemorrhagic smallpox, from which he died. Called to account by the local Board of Health, the attending physician maintained that there were no signs of smallpox in this case. Two women who dressed the body state that there was no eruption, yet the board at Indianapolis claims that when the body was exhumed it showed signs of hemorrhagic smallpox.

NEW YORK.

Personal.—Dr. William J. McKown, Albany, has been appointed assistant surgeon of the Tenth Infantry, N. G., N. Y. ——Dr. Luzerne Coville, Ithaca, was operated on for appendicitis, May 8.

Practiced Without License.—Mrs. Louisa Bauch, Buffalo, was convicted by a Supreme Court jury of practicing medicine without a license. She was once before convicted, but was allowed to go on suspended sentence. The penalty of her crime is one year's imprisonment and a fine of $250.

To Limit Distribution of Medicine Samples.—Elmira has passed an ordinance which provides that "No person nor persons shall distribute, or cause to be distributed in any private grounds or residences in the city, any free sample of a medicine; nor shall such sample be handed to any person under the age of fourteen years."

Medical Fakers.—Drs. Roswell Park, Ernest Wende and Henry Hopkins recently addressed a body of laymen in Buffalo on "Medical Fakers." Dr. Park gave a historical sketch of the fakers of the past. Dr. Wende spoke of the workings of "Antonius the Boy Wonder," a convicted faker, who has recently served a sentence, and Dr. Hopkins detailed the dangers, including scourges, pestilences, etc., suffered because of the superstitions and false presentations of fakers.

New York City.

Trustees for Roosevelt Hospital.—Governor Higgins has signed a bill providing for the election of two additional trustees for this institution, who are to be native-born citizens and residents of New York City.

Mount Sinai Hospital.—The fifty-second report of this institution shows it to be in a flourishing condition, although further support from the public is needed. Last year the hospital received contributions amounting to over $25,000 and $21,212 in legacies and bequests.

Contagious Diseases.—There were reported to the sanitary bureau for the week ended May 6, 621 cases of measles, with 13 deaths; 414 cases of tuberculosis, with 181 deaths; 334 cases of diphtheria, with 39 deaths; 256 cases of scarlet fever, with 14 deaths; 178 cases of cerebrospinal meningitis, with 111 deaths; 31 cases of typhoid fever, with 10 deaths, and 137 cases of varicella.

Smallpox.—Three cases of smallpox have occurred in a Brooklyn boarding house, and one of the patients was in attendance at a public school. The 500 pupils in this school have been vaccinated and the authorities do not think there is danger of the disease spreading. So far this year there have been only 33 cases of smallpox and 6 deaths in the city, while for the same period of last year there were 82 cases, with 7 deaths.

Oppose Consumption Home.—An application for a temporary injunction restraining the Board of Health of New York from opening a home for tuberculosis patients in Henry Street, Brooklyn, has been made by several residents in that vicinity. Dr. Billings of the board defends his plan on the ground that there are already a number of such homes in Manhattan which do good work and do not in any way endanger the lives of neighbors.

To Better the Milk Supply.—Forty of the largest milk firms have formed an organization which will be known as the Association for the Improvement of the Milk Supply of New York. Its purpose is to assist the Health Department in its efforts to secure a purer milk supply. The association expects to establish a regular system of inspection of the milk farms and to educate farmers. Ex-Commissioner Lederle has been retained as consulting analyst for the organization. This week two dealers have been fined $75 each and six others have been fined lesser amounts.

OHIO.

Bequest to Hospital.—By the will of the late John Linebaugh $5,000 is bequeathed to the Protestant Hospital, Columbus.

Unlicensed Practitioners Punished.—John Hubbard, a "faith doctor" of Waupakoneta, was fined $25 and costs, April 6, for practicing medicine without a license.——"Dr." X. W. Wittman, an itinerant patent medicine vendor, was arrested, April 8, in Lebanon, charged with the illegal practice of medicine, pleaded guilty, was fined $20 and costs, and ordered to leave town.

Personal.—Dr. Harrie B. Martin, Springfield, has sailed for Europe. He will spend a year in Vienna.——Dr. Leo F. Towers, a physio-medical practitioner of Toledo, has been reappointed a member of the State Board of Medical Examination and Registration.——Dr. David W. Meredith, Warsaw, sustained a fracture of the leg and other serious injuries in a runaway accident, April 10.——Dr. Mary Austin, Columbus, has been appointed to the staff of the Ohio Hospital for Epileptics, Gallipolis.——Dr. Jacob B. Shank, West Alexandria, was injured, May 1, in a collision between a wagon he was driving and a traction car.——Dr Estell H. Rorick, superintendent of the Athens State Hospital, has been elected superintendent of the Ohio Institution for Feeble-Minded, Columbus, vice Dr. Gustavus A. Doren, deceased.——Dr. Massillon

Cassat, Cincinnati, has donated his medical library of 4,000 volumes, valued at $10,000, to the Cincinnati Academy of Medicine.

New Ohio Physicians.—Starling Medical College held its fifty-seventh annual commencement exercises May 6, when a class of 29 received diplomas from P. W. Huntington, president of the board of trustees. Dr. Charles W. Dabney, president of the University of Cincinnati, delivered the address, and Dr. Starling Loving, dean of the college, the charge to the graduating class.——A class of 38 was graduated from the Ohio Medical University, Columbus, May 3. Fred J. Heer, president of the board of trustees, conferred the degrees, Dr. Emory W. Hunt, president of Dennison University delivered the annual address, and Dr. John W. Wright spoke on behalf of the faculty.——Cleveland College of Physicians and Surgeons (Medical Department of Ohio Wesleyan University) held its annual commencement exercises May 3. Prof. Richard T. Stevenson of Ohio Wesleyan University, Delaware, delivered the address of the evening.——Toledo Medical College (Medical Department of the Toledo University), held its annual commencement exercises May 9. Prof. Charles Zeublin of the University of Chicago delivered an address on "Scientific Education"; Dr. William A. Dickey, dean of the college, gave the faculty address, and Dr. Park L. Myers conferred the degrees.

PENNSYLVANIA.

Jail Quarantined for Smallpox.—Blair County Jail, Hollidaysburg, is under the ban of the State Board of Health because smallpox has broken out among the prisoners.

Tribute to Dr. Ulrich.—At the monthly meeting of the Delaware County Medical Society, May 4, resolutions of regret for the death of Dr. William Baggs Ulrich and of respect for his memory were read and adopted.

District Meeting.—A meeting of the physicians of the First Censorial District of the Medical Society of the State of Pennsylvania, comprising the counties of Chester, Delaware and Philadelphia, will be held at the hall of the College of Physicians, corner of Thirteenth and Locust streets, Philadelphia, at 8:30 p. m., May 26. Dr. J. N. McCormack, chairman of the committee on organization of the American Medical Association, will address the meeting on the necessity and advantages of organization.

Injunction Against Physician.—Dr. F. A. McMasters of Ridley Park is restrained from the practice of medicine in that place by an injunction issued by Judge Johnson. This was done at the instance of Dr. Horace Furness Taylor. Dr. Taylor testified to having purchased the good will and practice of Dr. McMasters for the sum of $300, when the latter left to locate in Pittsburg. He later, however, returned two months ago and resumed practice. Dr. McMasters denied that he had sold his good will, and said that Dr. Taylor paid him for being introduced to his patients as a qualified physician.

Philadelphia.

Deaths and Births.—The report from the Division of Vital Statistics for the month of April shows that there were 2,027 deaths and 2,597 births.

Personal.—Dr. Henry C. Shurtleff has returned from a prolonged trip to Mexico, the Pacific Coast, and British Columbia.——Dr. James Sibbald sailed for Europe, May 10.——Dr. Hugo Biffi, director of the Hygienic Laboratory, Lima, Peru, visited Philadelphia, April 28.

Saloonkeeper Held for Crime.—J. E. Casey, a saloonkeeper, was arrested, April 5, charged with performing a criminal operation on a girl 17 years old. At the preliminary hearing the patient was unable to appear, and the accused was committed without bail for a further hearing.

Milk Inspection Report.—The report from the Division of Milk Inspection of the Health Bureau for April shows that 4,643 inspections were made, 117.030 quarts of milk inspected, of which 1.315 quarts were condemned. The department made 113 chemical analyses and 670 microscopic examinations of specimens submitted.

Bacteriologic Laboratory Report.—The report of the bacteriologic laboratory of the Health Bureau shows that 1,789 cultures were examined for diphtheria; 525 specimens of blood were examined for the Widal reaction; 684 specimens of milk were analyzed; 146 specimens of sputum were examined, and 1,372 bottles of antitoxin were distributed. In the chemical laboratory 165 analyses were made.

Medical Inspection for April.—The number of inspections made by the medical inspectors, excluding the schools, numbered 2,894. They ordered 591 fumigations made and examined 68 cases for special diagnosis; made 4,915 visits to the different schools throughout the city, and excluded 715 children from the schools; they secured 109 cultures for diagnosis, made 115 injections of antitoxin, and performed 519 vaccinations.

Health Report.—The total number of deaths recorded for the week ended May 13 was 455. This is a decrease of 36 from the number reported last week, and a decrease of 39 from that of the corresponding period of last year. During the week 155 new cases of typhoid were reported, with 23 deaths, as against 256 new cases and 20 deaths in the preceding week. An inspection of the returns of the new cases shows that 60 per cent. are located in the five wards which receive Delaware River water by direct pumpage. Two wards which receive a supply of filtered water are credited with 7 cases. The total number of cases of contagious disease reported for the week was 240, with 36 deaths, as compared with 342 cases and 32 deaths for the preceding 7 days. The principal causes of death were typhoid fever, 23; consumption, 61; cancer, 19; apoplexy, 19; heart disease, 39; acute respiratory disease, 43; enteritis, 18; and Bright's disease, 50.

WISCONSIN.

Midwife Fined.—Anna Schreiber, a midwife of Milwaukee, was fined $50 and costs, May 6, for violation of the medical practice act in prescribing for an infant which died soon afterward, but the cause of whose death has not yet been determined.

Typhoid Epidemic Over.—The recent outbreak of typhoid fever in Milwaukee, supposed to have been due to infection brought to the intake of the waterworks system by ice from Port Washington, is now believed to be over. There were 140 cases, with 7 deaths.

Giant Cracker Silenced.—A new law, which went into effect May 5 prohibits the manufacture and sale of firecrackers more than five inches in length and five-eighths of an inch in diameter, under a penalty of a fine of not to exceed $100, and imprisonment for not more than six months.

Commencement.—The twelfth annual commencement exercises of the Wisconsin College of Physicians and Surgeons, Milwaukee, were held May 9. A class of 27 received diplomas from Dr. A. Hamilton Levings, president of the institution. Rev. H. H. Jacobs delivered the doctorate address.

Malpractice Suit Fails.—In the case of Robert Finley vs. Dr. Axel E. Hedback, Barron, in which $10,000 damages were asked for the alleged unskillful setting of a broken leg, the judge took the case from the jury, after hearing the evidence, and dismissed the case on the ground of no cause for action.

Personal.—Dr. Robert R. Leith has been elected city physician of Appleton and secretary of the local board of health.——Dr. D. Gilbert Hathway, Wauwatosa, was operated on May 9 in Milwaukee.——Dr. F. B. Hicks has succeeded Dr. H. G. Lampson as health officer of Washburn.——Dr. Ernst S. Schmidt has been elected city physician of Oshkosh.——Dr. and Mrs. J. Willis Rockwell, Centralia, were seriously injured in a runaway accident, April 15.——Dr. Max Staehle has been re-elected health officer of Manitowoc.——Dr. J. Burrows Atwood has been elected health officer of Oconto.——Dr. Thomas H. McCarthy has been elected health commissioner of Janesville.——Dr. Henry A. Norden has been elected city physician of Sturgeon Bay.——Dr. Joseph S. Cutler, Wauwatosa, has gone to Chicago to be operated on for appendicitis.——Dr. John F. Farr has been re-elected city physician of Eau Claire.

GENERAL.

Banquet to Dr. Emmet.—A banquet will be given in New York City, May 29, to Dr. Thomas Addis Emmet of New York City, in celebration of his seventy-seventh birthday anniversary. Dr. E. C. Dudley, Chicago, will be toastmaster.

***Manila Medical* Society Appropriates One Hundred Dollars for the Reed Memorial Fund.**—At the regular monthly meeting of the Manila Medical Society, held April 3, $100 was appropriated for the Reed Memorial Fund. Most of this was subscribed by individual members, and the full amount was made up from the fund of the society. The society is in a very flourishing condition, and at the meeting referred to eight new members were added to the list. Of these, judging from their names, four were native physicians.

Health Report of the Philippine Islands.—The Health Report of the Philippine Islands for December, 1904, states that there were 708 births registered during the month. There were 915 deaths during December; of these 894 were residents and 121 were transients. By studying the comparative mortality of the entire year, it is observed that the months of

February and March were the most favorable, with a mortality of 40.59 and 40.23, respectively, the lowest death rates registered during the year. On the other hand, August, September and October show the highest, the mortality reaching 55.28, 58.89 and 54.53. January and December had almost the same death rate—42.64 and 42.53. All the tuberculous patients of the infirmary of Bilibid Prison were transferred to the new hospital for tuberculosis situated on one of the banks of the Pasig River in Calle Marques de Comillas, where they can more properly be taken care of and will have more space and purer atmosphere. The Woman's Hospital, established in one of the buildings of San Lazaro, was transferred to Calle Alix, in the district of Sampaloc, and the rooms which were formerly occupied by this class of patients were fitted to accommodate insane patients, who for lack of room could not be admitted in the quarters provided for them in the Hospicio de San José.

Veto of Osteopathic Bill.—The profession of Pennsylvania labored hard to defeat the osteopath bill, but it was passed by the legislature. Their efforts were rewarded, however, by the governor's vetoing the bill, as commented on in The Journal last week. At the meeting of the Philadelphia County Medical Society, May 10, the committee on medical legislation brought a written report of their labor. Two bills were before the legislature. The Hoke bill, which consisted of amendments to the law of 1893, was supported by the committee and passed both houses by an almost unanimous vote, but the governor vetoed the bill, on account of some technical inaccuracies. The other, the osteopathic bill, was defeated twice in the house, but because of strong political efforts was finally passed. The senate passed it on original and final readings. This brought the bill before the governor for his signature or veto. The committee met the governor and was assisted by the representatives of the homeopathic medical societies. The discussion on the bill lasted three hours. Governor Pennypacker later vetoed this bill in the following language:

"I file, herewith, in the office of the Secretary of the Commonwealth, with my objections, Senate Bill No. 115, entitled: 'An Act to regulate the practice of and licensing of osteopaths in the State of Pennsylvania, the establishment of a board of osteopathic examiners representing the Pennsylvania Osteopathic Association and providing for the punishment of persons violating the provisions of this act.'

"The purpose of this bill is to establish a state board of osteopathic examiners, to consist of five members to be appointed by the governor. This board is directed to issue certificates of qualification to practice osteopathy to all applicants having a diploma from a legally recognized and regularly incorporated college of osteopathy. It further provides that licenses shall be issued to all persons who have practiced osteopathy in the state for four years prior to July 1, 1905, and to such persons as now legally hold a diploma from a reputable and legally conducted college of osteopathy. It further provides that the applicants after July 1, 1905, shall have attended for at least three separate years such a college of osteopathy and shall be examined by the board in certain designated branches, and that those who apply after July 1, 1907, shall in like manner have studied for four separate years and submit to such examination.

"Section 7, provides:

> Any person who shall practice or attempt to practice osteopathy in treating diseases . . . without having first obtained the license herein provided for . . . shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by a fine of not more than one hundred dollars or by imprisonment in the county jail for a period of not more than ninety days for each offense.

"There is nothing in the bill to indicate what constitutes the science of osteopathy. An effort to solve the query by an examination of the printed literature of the science is not very successful. Dr. A. T. Still, who is the founder of the science and is still living, in his autobiography, says:

> Who discovered osteopathy? Twenty-four years ago, the 22d day of next June, at ten o'clock, I saw a small light in the horizon of truth. It was put in my hand, as I understood it, by the God of nature. That light bore on its face the inscription: "This is my medical library, surgery and obstetrics. This is my book with all directions, instructions, doses, sizes and quantities to be used in all cases of sickness, and birth, the beginning of man: in childhood, youth and declining days." I am something of what people call "inspired." . . . The other classes have different names for it—clairvoyancy and clairaudient. Sometimes I was so clairvoyant that I could see my father twenty miles from home: I could see him very plainly cutting a switch for my brother Jim and I, if we hadn't done a good day's work. That is called clairvoyance. Then I could hear him say: "If you don't plow faster I will tan you twice a week." That is clairaudience.

"In his Philosophy of Osteopathy he says:

> Principles to an osteopath means a perfect plan and specification to build in form a house, an engine, a man, a world, or anything for an object or purpose. To comprehend this engine of life of man which is so constructed with all conveniences for which it is made, it is necessary to constantly keep the plan and specification before the mind, and in the mind, to such a degree that there is no lack of knowledge of the bearings and uses of all parts.

"However true this may be, it is too indefinite to give the ordinary layman any very accurate description of the science. Since the bill refers to other schools for the practice of medicine, it is probably a school, and it appears from Section 5 that the holders of certificates are not to prescribe or to use drugs or operative surgery. The main reliance would appear to be on the manipulation of muscles and nerves, but this conclusion is entirely an inference and may be incorrect. It must be assumed, however, that there is some scientific truth which those interested in osteopathy have discovered and that it is utilized in the treatment of diseases. The study of medicine and surgery has been conducted for ages, and we have much legislation which is applicable to its conduct. Under the act of May 18, 1893, a medical council was established which issues licenses after examinations authorizing the applicants to practice medicine and surgery. If, then, osteopathy represents some truth in the treatment of disease, the knowledge and use of which would be beneficial to the diseased and the injured, with what consistency can these practitioners be prevented from making such use of it? Why should their patients be deprived of such benefit as may result from the discovery? If, however, this bill should become a law, the physician who would practice or attempt to practice what the osteopaths have discovered would be punishable by imprisonment for ninety days. This would be possibly a great loss to the community and certainly a great wrong to the physicians.

"The whole thought of the establishment of schools of medicine is unscientific. All those engaged in such pursuit ought to be seeking to ascertain the truth and to accept it wherever it may be found. The approval of this bill would appear to give the authority of the state to a system of practice in the healing art which excludes the use of medicine and the use of surgery. Why should there be an attempt to so confine the operations of the mind? If both drugs and surgery are useless they may be rejected, but if they should at times be found to be beneficial, why should any science for the enforcement of a theory make the effort to exclude their use?

"Should the bill become a law licenses would be issued by the State Board of Osteopathic Examiners and not by the Medical Council of Pennsylvania, which would be an anomaly in our legislation on the subject.

"For these reasons the bill is not approved."

The committee, which consisted of Drs. Alfred Stengel, H. A. Hare, Henry Beates, J. Madison Taylor, Charles H. Frazier, J. M. Anders and L. Webster Fox, recommended that the society have a standing committee on medical legislation to look after all similar matters affecting the profession.

FOREIGN.

Hospital for Crippled Children in Holland.—The Queen of Holland is said to have given $100,000 recently to found a hospital for crippled children at The Hague.

Dengue in Australia.—In an epidemic of dengue in Brisbane, Queensland, more than one-half the inhabitants have been stricken, although the death rate has been very low.

Ankylostomiasis in Germany.—From March 8-29, 1905, according to Public Health Reports, 82 cases of ankylostomiasis were reported in the Arnsberg mining district in Germany.

Leprosy in Germany.—In the German Empire, during the year 1904, 24 cases of leprosy were registered. Of these, 19 cases occurred in Prussia, 3 in Hamburg, 1 in Mecklenburg-Schwerin, and 1 in Alsace-Loraine.

French Yellow Fever Commission in Brazil.—The members of the commission from the Paris Pasteur Institute have arrived at Rio de Janeiro and were entertained at a banquet given by the minister of foreign affairs a few days ago.

Six Tons of Quinin a Year.—This is the amount of quinin taken annually by the people of Italy, according to the *Riforma Medica*. The state produced nearly 30,000 kilograms of quinin during 1903-04, and sold nearly half this amount. This is equivalent to six tons a year. The population of Italy is 32,449,754.

First Hospital for Eye Affections in Paris.—Baron Adolphe de Rothschild has built and equipped the first ophthalmic hospital in Paris. It is said to be a model in every respect. The stone building is an imitation of an old Norman chateau, and is said to be one of the architectural ornaments of the city. Two hundred patients were admitted the first day.

Diminishing European Birth Rate.—The birth rate in the German empire continues its downward course, being only 33.9 per 1,000 in 1903, from 35.7 per 1,000 in 1901. In Great Britain the birth rate has fallen from 30.7 in 1893 to 27.6 in 1904. The last statistics give 22 per 1,000 as the latest figure for the birth rate in France, according to the *Semaine Medicale*.

Inroads of Alcohol in Berlin.—Professor Stadelmann of Berlin says that 7 per cent. of all the cases admitted to the Friedrichshain general hospital in his charge are cases of delirium tremens. He believes that between one-fourth to one-third of the diseases afflicting men in the districts in Berlin inhabited by workingmen are due to the abuse of alcohol. It is one of the principal reasons for the increase in suicides in Berlin, which had 32 suicides to each 100,000 inhabitants in 1904. Paris had 26, Vienna 24, Rome 18, and London 13.

The New German Volkswohlfahrtsamt.—The German government has been styled paternal in its provisions for the people. but the new bureau that has been created with the above title must certainly be styled maternal in its solicitude for the welfare of the populace. This is the literal meaning of its name. The bill creating the new bureau states that in the care for the sick, the invalid and the poor, the healthy, provident classes of the community must not be forgotten. and this bureau is to study means to keep them well and thriving and raise the standard of the public health and physique.

Schiller as a Physician.—May ninth was celebrated by the Germans abroad and in this country as the hundredth anniversary of the death of Friedrich Schiller, the great poet, dramatist and historian. It is not generally known that he commenced his career as a regularly graduated physician. The *Deutsche med. Wochft.* has been collecting data in regard to his work as a physician. and reviews his medical writings and teachings. He was a pupil of Boerhaave, and was imbued with the "humoral" doctrines of the day. The general conclusions of Magnus' article on the subject are to the effect that neither the science of medicine nor Schiller himself seem to have derived any permanent benefit from his connection with medicine. He soon abandoned it.

Nursling Consultations in Madrid.—Dr. Ulecia of Madrid has been instrumental in founding and conducting the free dispensary where mothers can bring their babies every week for consultation with the physician. They obtain advice how to keep them well. while at the same time receiving milk of superior quality for their use. At a recent conference on the subject of charitable work in this line in Europe and America, a row of mothers with their babes sat on the platform behind Dr. Ulecia, and he was able to present many children in good health who owed their lives undoubtedly to his trained observation and advice. These nursling consultations and milk stations are known in Europe as the "Drop of Milk." (Goutte de lait or gota de leche.) Ulecia is trying to arouse interest to have such institutions founded in every town throughout Spain.

Epidemic of Cerebrospinal Meningitis in Germany.—To date over 1,400 cases of the disease have been reported, and the mortality has been fully 70 per cent. The contagiousness of the disease has been apparently established by a number of groups of cases. In Radmann's experience with 30 cases they occurred in groups in four instances. A brother and sister showed symptoms of the disease with an interval of thirty-six hours in one case. The incubation on an average was apparently between this and forty-eight hours. Only 12 persons in the 300 affected at Kattowitz were more than 12 years old. An exanthem is frequently observed, and the cases presenting it seem to be milder than the others. Long hot baths and wet packs were symptomatically beneficial, but no medication seemed effectual, although sodium iodate has been favorably mentioned by some. The Weichselbaum diplococcus was found in all of the 760 cases examined at Beuthen. The epidemic has spread mostly south and east, invading Austria and Russia, but a few scattered cases have occurred in northern and western Germany. The mortality in the last mentioned is not so high as in the endemic focus, only 53 per cent. The cases seem to be grouped in a comparatively limited area, and the subjects have generally been adults

Pharmacology

The Fundamental Principle of Medical Ethics.

The words ethics and ethical have been referred to so frequently of late, in connection with the proposed work of the Council on Pharmacy and Chemistry of the American Medical Association, that one is almost led to believe that the origin and the limitations of medical ethics are in some mysterious way confined to the use or the non-use of proprietary medicines and that, to be strictly ethical, the physician should, or must, confine his drug medication to the use of ethical preparations. Nothing could be more remote from the actual facts than this supposition and, while it is true that proprietary medicines do play a very important part in the consideration of ethical conduct and practices of medical practitioners, it is not because these medicines are proprietary or secret, but because they are likely to lead the physician using them into unknowingly and unwittingly committing grave and serious errors.

The word ethics has well been defined as designating the science of right conduct, or the doctrine of man's duty to himself and to the rights of others. This science or doctrine is not to be considered as being a theory of modern conception, but is a product of evolution representing the accumulated experiences, of countless observers and teachers during the various ages and stages of the world's history.

It would be folly, therefore, to suppose that any number or class of individuals could set up for themselves a set of regulations, or a system of ethics at variance with the accepted rules of moral obligations that guide and regulate the conduct and relations of the remaining portion of the human family. These fundamental facts should always be borne in mind in discussing the relations of physicians to patients, as these relations can in no way be considered exceptional and are subject to the same standards of right and wrong that govern the relations and the actions of the remaining portion of the community.

In this connection it may be interesting to note that the frequent assertion that a physician's first duty to his patient is to do good, regardless of the way it is done, or of the means or the methods employed, is to be classed as being one of the most fallacious and misleading. As physicians or as men, our duty to do good must, and properly should, be made subservient to the more imperative and primarily more important rule, not to do harm. The generally accepted importance of this rule or law will be more appreciated when we realize that it constitutes the underlying foundation of all acceptable forms of religion, of all known systems of ethics and of all modern compilations of statute law.

The peculiar position that we as physicians occupy, in our relations to patients, makes the duty of closely observing this fundamental law or rule of conduct doubly imperative, as it undoubtedly increases the possibilities of the ultimate harm that may be done in cases where the rule has been overlooked or ignored. In none of our relations to our patients is there greater danger of losing sight of this very important and vital rule of conduct than in the use, or rather abuse, of proprietary medicines. Here the possibilities of doing harm are numerous and varied, they may be immediate or remote, evident or obscure, vital or of little direct importance, but they are ever present and should be inquired into diligently, and, if possible, recognized and properly presented for the instruction and guidance of fellow practitioners. In this connection it may be properly asked: How many of us ever stop to inquire as to what may have been the history of the hundreds of new remedies that have been tried and found wanting during our own experience? They have gone out of use, it is true, but they have gone out of use in a way and at a price that is appalling. Hundreds of physicians have tried them on thousands of patients, causing unnecessary expense, prolonged suffering and, not infrequently, untimely deaths.

FURTHER COMMENTS QUOTED.

We submit below some expressions of opinion from various publications which discuss the general subject of secret nostrums and the plan of the Council on Pharmacy and Chemistry:

The Druggists' Circular and Chemical Gazette:—"With the aims and object of this council no honest man or woman can find fault. We need just such work accomplished and we need it badly. The shelves of pharmacists are being incessantly loaded with worthless preparations which unposted medical men are wiled into subscribing by smooth-tongued detail men, tempting advertisements, and free samples. After the druggist has become stocked with such worthless stuff the doctor becomes disgusted with his results and quits prescribing it. As a result package after package and bottle after bottle accumulates on the shelves to increase the difficulty of finding standard goods. The price of these nostrums is usually high, so that the dead stock represents a considerable amount of capital. The druggist sometimes analyzes such goods, usually to find that a goodly number of them are very nearly the same in composition, and a temptation to 'substitute' is presented to him. When substitution is easy, the conscientious druggist is at a disadvantage as compared with his unscrupulous neighbor, and so he ought to be in favor of anything which will tend to remove this disadvantage.

"Human nature at its best is made of frail material. Could we calculate on the strength of character, intelligence, sympathy, affection and firmness of every individual it might be possible to determine how any given social experiment would be likely to terminate. A council like this one of the American Medical Association is pretty certain to be subjected to great strain unless it degenerates into inefficiency. Just in proportion to its success in carrying out the purposes for which it was created will be the strain to which its members are certain to be put. To properly execute the duties they have assumed will require a large amount of work that will have to be done without remuneration other than the honor which the position which they hold can confer. To shirk this work will be to court failure for the enterprise. To do the work and do it properly will be to win ill-will and invite secret undermining of good name. It will be well-nigh if not quite impossible for the members to draw the lines exactly where they think they should be drawn. It will be found well-nigh if not quite impossible to devote time and labor enough on certain articles to be sure of the truth concerning them. In giving the advantage of the doubt it will not always be possible to know that it is being given justly. The promoters of commerce are usually pastmasters in the art of using the hypnotics of conscience. They win advantages over rivals by such use. Men to whom they would not dare to offer a bribe of money they will offer work. Men who do not care for such work as they have to offer and who might even look upon it as bribery will receive a chloroforming dose of being elected to the coveted presidency of some society. Where even this will not win, friends of the man whose influence is sought receive these honors or emoluments and the promoters of commerce win through affection the good will that could not otherwise be bought. If it is concluded that they can not be won, that their presence on the council is dangerous to a certain interest, then it becomes necessary to get them removed from the council and have a pliant tool placed there. The powerful corporation that has much at stake will work for votes to make the change, and the character of the man that holds out most firmly against them will be quietly, steadily, and surely undermined. If he is a man of original thought he will be pronounced a dangerous crank. Somehow—anyhow—they will seek to have him deposed.

"How long will the members of the council stand all these strains? Charges of corruption will be voiced abroad, and the most innocent and inoffensive, by persistently defending what he deems the right, will bring on himself the secretly uttered smirch. Of course there will be none of this until the council's work begins to tell. It is only in case of success that these things can happen. Then good men may find it very uncomfortable to remain in the council while for bad men the inducements to get the appointment will be large. Should the position ever mean money, promotion, or advancement of personal interest, the struggle will commence and justice will begin to miscarry. IS THERE KNOWLEDGE ENOUGH, AND OF THE RIGHT KIND, IN THE AMERICAN MEDICAL ASSOCIATION, TO THWART COMMERCIALISM AND TO ESCAPE THE RIVAL POLITICS THAT IS PRETTY CERTAIN TO APPEAR? IF THERE IS, THEN THE EXPERIMENT WILL BE SUCCESSFUL AND WILL BENEFIT AND BLESS BOTH PHARMACY AND MEDICINE. IF THERE IS NOT, THEN WE FEAR THAT OUR LAST CONDITION MAY NOT PROVE TO BE ANY IMPROVEMENT ON OUR FIRST."

The Journal quotes the above at length because of the excellent presentation of the situation. The last portion is accentuated by us to bring it to the attention of the physicians of the country.

Journal of the Michigan State Medical Society (April): "Thus for the first time the medical profession will have established rules for advertising in its journal—supported by a scientific study by its own experts. It is to be expected that all the state medical journals will adopt this standard, and doubtless many private journals. . . . The names of the members of the council give assurance that the sifting will be done wisely and thoroughly.

"We are especially pleased to make this announcement because the council of the Michigan society presented the same idea to the meeting of that body last June. It received it favorably, and instructed its delegates to present it to the American Medical Association and to urge its adoption. It was so presented, but fell by the way. Its adoption by the Board of Trustees fully commends itself to the profession of Michigan, equally with that in other states. Various objections were made to it at the Atlantic City session of the American Medical Association, but these seem to be overcome, as indeed they were but straws. Intelligence and horse sense are all that is needed, inasmuch as the committee is backed by the wealth, prestige and power of a fairly united profession.

"No longer can it be said that the American Medical Association does nothing for the 'rank and file' of the profession, because it has now undertaken to flood with light the darkness of therapeutic agents used by said rank and file. The greatest medical organization of the world has set its stamp of disapproval on the hidden war of commercialism, and stands for the open dicta of expert scientists. With a mighty stride intelligent therapeutics will advance in its mastery of disease.

"This movement will test the power of the organization By it we shall learn how firmly commercialism has intrenched itself within the profession. With the hundreds of millions of dollars invested in the business of secret remedies, commercialism will seek to give this move of the profession a 'black eye.' It is hoped that every physician will actively stand for open, honest, scientific pharmacy, every day in the year and under all circumstances."

Correspondence

WORKS AND NOT WORDS.

An Appeal from Mr. Bok to the Medical Profession.

PHILADELPHIA, May 15, 1905.

To the Editor:—During the last year I have received hundreds of letters from physicians in every part of the United States commending the attitude of the *Ladies' Home Journal* in its efforts to awaken the public to an understanding of the patent medicine curse. Scores of commendatory resolutions from medical associations have likewise come to our company. All these have been gladly received and appreciated, and our acknowledgments in each case have tried to express this fullest feeling of satisfaction. It is, therefore, with no lack of appreciation that I say that, while these individual and association commendations have been pleasant, I could wish the sentiments therein expressed might have resulted in some effective co-operative work.

What I mean is this: During the past winter there was introduced into the legislatures of not less than fourteen states bills which had for their object the regulation of the sales of injurious patent medicines, or the compulsory printing of the ingredients of these medicines on the label of each bottle, under penalty of fine or conviction. Committee hearings were given on these bills in each state. The proprietors of some of the patent medicines were exceedingly active—and effectively so—in their opposition to these bills.

Associations interested in the patent medicine traffic worked with unceasing vigil to defeat the bills—which they succeeded in doing. The newspapers in these states carrying the advertisements of patent medicines were notified that this legislation was not desirable. Skillful lawyers appeared before these committees in opposition to the bills. Every effort, in short, was made to defeat these measures, and in all save one state the bills were "killed."

Now, who appeared in favor of the bills at these hearings? Generally, members of the Woman's Christian Temperance Union whose zeal usually exceeded their discretion and judgment—well-intentioned but ineffective. In one or two cases, representatives of some liquor dealers' association appeared in behalf of the bills. But not in a single instance, and I speak by authority of personal representation at each of these hearings, did there appear a single physician or the representative of a single state, county, or city medical association. There was not the slightest active interest taken by physicians in these hearings, and yet scores of physicians wrote me irate letters after the bills were defeated, deploring the corruption (?) of the legislatures in their states!

These hearings were usually of the most perfunctory order, and, from the side of any advocacy of the bills, absolutely without interest, since scarcely any one appeared to give intelligent or convincing reasons why the bills should become laws. Now, I ask the physicians and medical associations of this country: how are we ever to secure effective legislation against patent medicines until some intelligent reasons are presented by intelligent people having the respect of a community, why such legislation should exist?

It is not only likely, but probable, that during the next fall and winter terms there will be introduceed into the legislature of nearly every state in the Union, a regulative patent medicine measure—bills which have a vital interest to every physician in the United States; and my object in this letter is to draw to the attention of every physician, and particularly every medical association, not only the need, but the necessity, for their co-operation in this legislative work.

It is not meeting this question for physicians and associations to contend that their appearance and arguments before these committees would be deemed as emanating from interested motives, and thus have no weight. Surely, the other side does not argue thus, and their appearance and arguments before these committees are certainly from "interested motives." The statements and arguments of reputable physicians of the communities concerned would have the greatest possible weight before these committees. In fact, in several cases members of these committees have asked and desired that some physicians of standing should appear at the hearings, and marveled at their uniform and consistent absence.

Here is not only direct work for every medical association in America, but an actual crying need for such work, and, if I may speak a little frankly, a clear case of shirking responsibility where such work is not forthcoming.

I shall be in a position to know of the introduction of these legislative measures in any state where they are presented, and if in each state the leading medical association would appoint a committee, and a similar committee appointed by county and city associations, and the full name and address of the chairman of each committee can be forwarded to me, between now and October 1 next, it will afford me pleasure to communicate with such party immediately on the introduction of such a measure in the legislature of his state and supply him with printed material, now being prepared, containing arguments for the regulation of the patent medicine traffic in America and showing what has been done by other nations.

But the fact can not be too strongly urged that the most representative physicians in the state, city or county, the men occupying the highest positions in their professions and having the unquestioned respect of their communities, should be members of such appearing committees. The greatest weight should be given to the arguments presented, ensuring the most effective influence.

It should not be necessary to add—but still I will do so, in case of the exceptionally suspicious mind that is always with us: that no advertising element, so far as the magazine of which I am editor is concerned, enters into these desires on our part or into the material being prepared. The publishers of the *Ladies' Home Journal* have no desire that their periodical shall enter into these hearings as a periodical, mentioned, quoted, or commended; they do not crave such advertising; the magazine does not need it. The periodical entered on its editorial treatment of the patent medicine curse from principle and from no other motive. Its only interest is the interest of the great public at large: not the commendation either of it or its editor. Both have received that at the hands of the medical profession. It now asks at the hands of that profession works, not words.

Edward Bok,
Editor of the *Ladies' Home Journal.*

The Opium Question in the Philippines.

Manila, April 14, 1905.

To the Editor:—In connection with the editorial in the *Medical Review* Dec. 10, 1904, on the above question the following statements may be worthy of consideration:

It is to be regretted that the report of the committee appointed to investigate the use of opium and matters therewith connected has not been published, as an acquaintance with its contents might lead to an avoidance of inaccurate statements in regard to its purport. But as the report is voluminous, containing not only the findings, conclusions and recommendations of the committee, but also all the evidence, statistics and laws on which they are based, it is still in the hands of the printer. The report will stand or fall on its own intrinsic merit, and should be read, if a sufficiently patient reader may be found, before the final word of criticism or commendation is said. Until the report is read, and the evidence on which it is based is known, it seems premature to assert the report is a compromise report, or to insinuate that there was a compromise with facts.

"The combination of events unknown (to the writer of the editorial in question), which induced the commissioners to take up the question of the regulation of the opium traffic, to protect the natives," was in no way connected with the "exaggerated statements of the harmfulness of the use of the drug, or with the commissioners' ignorance of the fact that the Asiatic nervous system is absolutely different from that of the European."

In passing, it might be said that the writer's self-attributed ignorance is fairly well supplemented by the conviction he has, that the commissioners "have no doubt been influenced by exaggerated statements, etc." The facts are:

1. The regulations in force during the Spanish supremacy, in regard to traffic in opium, ceased after the American occupation, so that at present there are no restrictions on its introduction into these islands, or on its use in any form in these islands.

2. The use and abuse of the drug by the natives of the Philippine Islands is rapidly and steadily increasing.

3. A very marked increase in the consumption of opium, resulting in a corresponding increase in the number of opium habitués, took place during and immediately after the cholera epidemic of 1902-3. This increase may possibly be due to the natives observing the comparative immunity of the Chinese to cholera, and attributing it to the use of opium rather than to the use of hot cooked food and boiled water (tea); moreover, opium may be of benefit in cholera.

4. All observers agree that the Malay possesses less power of resistance to the effects of opium than the Asiatic. The inhabitants of these islands are Malays, not Asiatics. There does not seem to be much similarity in the effects of the Betel nut and of opium.

The Chinese Chamber of Commerce and a part of the clergy here were opposed to the bill as drafted by the commissioners, prior to the appointment of the committee, but, strange to say, both parties, Chinese and clergy, were in favor of absolute prohibition. The Chinese gave the same moral reasons for being in favor of prohibition as were given by the clergy; so true is it that the Chinese never present their real reasons if others may be substituted.

It is believed that the statement made in the *Medical Record* that as much opium is now obtained in Formosa as was formerly obtained, will be modified in case the report of the committee is read.

E. C. Carter,
Major and Surgeon U. S. Army, Commissioner of Public Health, Chairman of the Opium Committee.

Interurban Clinical Clubs—A Suggestion.

Baltimore, May 12, 1905.

To the Editor:—The remarkable success which has attended the Society of Clinical Surgery suggested to me the organization of a small clinical club among a few of the younger men in the eastern cities. I write now to urge the formation of similar clubs in different parts of the country. The objects should be:

1. The promotion of the scientific study of disease among the younger men.
2. Demonstration of methods of teaching and of work.
3. The encouragement of good fellowship among men working at the same problems.

The clubs should be small, not more than twenty or thirty members, so that all could see the demonstrations, etc. No papers should be read. Methods of work and of teaching should be specially dealt with, and as far as possible the men visiting a city should follow the routine of the day in the school at which the meeting is held. Demonstrations should be provided in cognate subjects, in the physiologic, pathologic and pharmacologic laboratories, and in the surgical clinics. One or two meetings a year should be held, and sometimes two adjacent cities could be visited. The clubs should not be large, and they should in no way take the place of or interfere with existing societies. The educational features for the members should be kept in view.

Six or eight of such clubs, grouped as follows, would do much to promote the study of internal medicine; every fifth year a joint meeting might be held.

1. Montreal, Kingston, Quebec and Burlington.
2. Buffalo, Cleveland, Toronto, London (Ont.)
3. Chicago and St. Louis.
4. Louisville, Memphis, Cincinnati, Columbus and Indianapolis.
5. St. Paul, Minneapolis, Omaha and Winnipeg.
6. New Orleans, Nashville, Birmingham and Atlanta.
7. Washington, Richmond and Charleston.

William Osler.

Book on Uric Acid.

Washington, D. C., May 13, 1905.

To the Editor:—Referring to the announcement on page 1547 of The Journal of May 13, as to republication of the series of articles on immunity, permit me to express the hope that the series of valuable papers on uric acid will also be republished in book form and under the author's name.

J. B. Nichols.

[Editor's Note: The editorials on "Truth and Poetry of Uric Acid," slightly enlarged, will be reprinted in book form with the author's name.]

Association News

New England Special to Portland.

Arrangements have been made for special cars to accommodate members of the A. M. A. Outing Club and other persons from New England who are going to the Portland session. The fare from Boston is $78.50 for the round trip via the C., M. & St. Paul Railroad and Northern Pacific from Chicago, visiting Yellowstone Park (5½ days), and returning via the Canadian Pacific to Montreal, making short stops in the Canadian Rockies and visiting the Canadian National Park. The party contemplates leaving Boston June 27 for a trip of four weeks or more, visiting the important points in the American and Canadian Northwest where stopovers will be allowed. The party can be joined at any point en route, and change of route returning can be made if desired. Further particulars may be obtained from the secretary of the committee, Dr. E. R. Campbell, Billows Falls, Vt.

Marriages

Philip C. Hay, M.D., Chicago, to Miss Helen Davis of Oshkosh, Wis., May 3.

John T. Hosey, M.D., to Miss Blanche Curling, both of Enterprise, Miss., May 3.

Luella S. Cleveland, M.D., Harlan, Iowa, and Charles E. Coplin of Leadville, Colo.

E. B. Cummings, M.D., Bronson, Kan., to Miss May Hammel of McCook, Neb., May 7.

Charles H. Merrill, M.D., Shenandoah, Ohio, to Miss Zora Starr of Cleveland, May 3.

J. C. Hall, M.D., Decatur, Ill., to Miss Clara Turpin of Oreana, Ill., at Decatur, May 3.

Frederick Greenbaum, M.D., Chicago, to Miss Blanche D. Klein of Philadelphia, April 27.

Daniel Scott Schenck, M.D., Safford, Ariz., to Miss Hattie Webb of Bryan, Texas, April 26.

R. W. Campbell, M.D., Stillwater, Minn., to Miss Lucile Proventura, at Minneapolis, May 3.

Reed McCullough Baird, M.D., to Miss Jennie Penn Young, both of Wheeling, W. Va., April 29.

R. H. Draper, M.D., Bloomington, Tenn., to Miss Minnie Coomes of Knottsville, Ky., May 3.

John D. Brewer, M.D., to Miss Lucile M. Grisham, both of Newbern, Tenn., at Memphis, May 3.

Louis N. Wilson, M.D., Mardela Springs, Md., to Mrs. Margaret J. Payne, at Baltimore, April 29.

Ernest W. Hilletts, M.D., Pittsburg, Pa., to Miss Anne Beattie of Hyde Park, Mass., May 10.

W. H. Glasgow, M.D., Enid, Tenn., to Mrs. Bertha J. Fishleigh of Ontario, at Cincinnati, April 26.

J. E. Nixon, M.D., New Mount Pleasant, Ind., to Miss Mabel Hiester of Ridgeville, Ind., April 12.

John Cresswell Slawson, M.D., New York City, to Miss Blanche Weller of Waverly, N. Y., May 16.

Michael George Foster, M.D., London, Eng., to Mrs. Margaret Manning Russell, in Appleton Chapel, Harvard University, Cambridge, Mass., May 9.

Deaths

Heber Nelson Hoople, M.D. Toronto University, 1885, Bellevue Hospital Medical College, 1885, member of the American Medical Association, Kings County Medical Society, Medical Society of the State of New York, British Medical Association, Associated Physicians of Long Island, American Rhinological and Otological Society, and New York Physicians' Mutual Aid Society, died at his home in Brooklyn, May 8, aged 48.

George W. Friend, M.D. Jefferson Medical College, Philadelphia, 1851, for more than half a century a practitioner of Manchester, Chesterfield County, Va., from 1872 to 1874 a member of the state legislature; assistant surgeon in the Confederate service during the Civil War, died suddenly at his home in Richmond, May 5, from cerebral hemorrhage, aged 77.

Washington Matthews, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1864, assistant surgeon, U. S. Army, 1868; promoted to surgeon, 1889; retired from active service, 1895, died in Washington, D. C., April 29, from locomotor ataxia complicated with chronic nephritis and fracture of right femur, after an illness of many years, aged 61.

Joseph O. Yost, M.D. Medical Department of Western Reserve University, Cleveland, 1892, died suddenly from heart disease at his home in Hazelton, Youngstown, Ohio, May 2, aged 37. At a special meeting, held May 3, the Mahoning County Medical Association decided to attend the funeral in a body.

John A. Finlayson, M.D. Kentucky School of Medicine, Louisville, 1892, a member of the American Medical Association and a leading factor in the local medical, social and political matters in Emmet County, Iowa, died at his home in Armstrong, May 9, from appendicitis, after a short illness.

Robert Dickey Wallace, M.D. Cleveland Medical College, 1853, the oldest practitioner of Newcastle, Pa., some-time president of the Lawrence County Medical Society, died at his home in Newcastle, May 2, from arteriosclerosis, after an illness of three weeks, aged 77.

Thomas L. Newberry, M.D. Jefferson Medical College, Philadelphia, 1866, of Hiseville, Ky., a surgeon in the Confederate service during the Civil War, died in an infirmary at Louisville. May 3, five days after an operation for cystitis, aged 71.

John F. Oakley, M.D. Vanderbilt University Medical Department, Nashville, Tenn., 1890, a member of the American Medical Association, died at his home in Augusta, Ark., May 3, from malarial poisoning, after an illness of two years.

Frank McMahan, M.D. Sioux City (Iowa) College of Medicine, 1905, demonstrator of chemistry in that institution, died suddenly at Sioux City, May 7, from fatty degeneration of the heart, aggravated by acute alcoholism, aged 26.

William Vincent Wallace, M.D. New York University, New York City, 1855, one of the earliest members of the Rhode Island Medical Society, died at his home in Providence. April 29, after a short illness, aged 76.

George N. Watier, M.D. Trinity Medical College, Toronto, Ont., 1883, coroner of Washington County, Minn., died suddenly at his office in Stillwater, May 1, after the accidental ingestion of carbolic acid, aged 54.

Louis F. High, M.D. College of Physicians and Surgeons, Baltimore, 1891, medical director of the Pineshire Sanitarium, Southern Pines, N. C., died recently at a hospital in New York, after a long illness.

William M. Hammond, M.D. University of Maryland School of Medicine, Baltimore, 1845, for 40 years a resident of Kansas City, Mo., died at his home in Rosedale, Kan., April 27, aged 89.

Dwight M. Wright, M.D. Ohio Medical University, Columbus, 1898, of McArthur, Ohio, died at the home of his parents in Logan, Ohio, April 28, after an illness of more than two years, aged 27.

F. M. Baldwin, M.D. College of Physicians and Surgeons of San Francisco, 1900, died at his home in Reno, Nev., May 1, from pneumonia, after an illness of four days, aged 32.

Herbert H. Ellis, M.D. College of Physicians and Surgeons in the City of New York, surgeon for the Encampment (Wyo.) tie camp, died suddenly, April 29, from heart disease.

Walter L. Taylor, M.D. Years of Practice, Ohio, 1895, of Cincinnati, for 65 years a practitioner, died suddenly in Brooklyn, N. Y., May 9, from cerebral hemorrhage, aged 85.

Judson Coy, M.D. Harvard University Medical School, Boston, 1882, of Prince William, N. B., died at Wakefield, Mass., from nephritis, after a long illness, aged 53.

George H. Munson, M.D. Medical College of Indiana, Indianapolis, 1888, died at his home in Stanford, Ind., May 10, from typhoid fever, after an illness of 10 days.

Seymour C. Troutman, M.D. College of Physicians and Surgeons in the City of New York, 1854, died at his home in Somerville, N. J., May 6, aged 83.

S. D. Welch, M.D. Transylvania University Medical Department. Lexington, Ky., 1847. died suddenly at his home in Nicholasville, Ky., May 1, aged 81.

Lee M. Pettit, M.D. Missouri Medical College, St. Louis, 1859; St. Louis Medical College, 1878, died at his home in Greenville, Mo., May 4, aged 69.

James H. Joyner, M.D. Louisville (Ky.) Medical College, 1859, died at his home in Goodlettsville, Tenn., April 30, after an illness of two years, aged 77.

Andrew C. Donovan, M.D. Rush Medical College, Chicago, 1871, died suddenly at his home in Excelsior Springs, Mo., from heart disease, May 2, aged 55.

F. A. Wallace, M.D. Medical Department of the Pennsylvania College at Gettysburg, 1841, died at his home in Fox Lake, Wis., April 27, aged 86.

G. Lewis Yager, M.D. Boston, 1901, of Cambridge, Mass., died at his home in Dorchester, Mass., April 13, from cerebral hemorrhage, aged 29.

Joseph H. Ford, M.D. Medical College of Indiana, Indianapolis, 1872, died at his home in Auburn, Ind., May 3, after an illness of a year.

Jared Bassett, M.D. Albany (N. Y.) Medical College, 1839, died at his home in Evanston, Ill., May 10, from pneumonia, aged 91.

James Wilson, M.D. Memphis (Tenn.) Medical College, 1848, died at his home in Plano, Texas, May 4, aged 80.

Queries and Minor Notes

PHYSICIANS MAY DISPENSE—CARDS IN NEWSPAPERS—CHARITY PROBLEMS.

KNOB, CAL., May 5, 1905.

To the Editor:—As a member of the American Medical Association and a reader of THE JOURNAL, I am much interested in the subject of professional ethics as discussed by THE JOURNAL and by other journals. Please answer the following questions relative to professional ethics: 1. (*a*) Is it considered non-ethical for a physician to dispense his own drugs instead of writing prescriptions? (*b*) If not, is it non-ethical for a physician to have printed on his professional card the statement that he does not write prescriptions, but dispenses his own drugs? 2. Would it be considered non-ethical for a physician to announce in the local lay papers of his community that he would treat free of charge all patients calling at his office during certain hours on certain days? Question 2 is prompted by the fact that in all communities physicians are called on to treat a great many patients from whom they receive no remuneration, some of whom are amply able to pay if they would. Dr. A. believes that those who can and do not pay would do so rather than be considered charity patients; also that it puts him in a better position to demand his pay from his non-charity patients.

DR. E. H. PITTS.

ANSWER.—1. (*a*) The relative merits of prescription writing versus drug dispensing have no ethical relations. The choice is a matter of individual taste and local custom. (*b*) The placing on a professional card any information other than the name, office hours or telephone number is in most places looked on as at least bad taste. To add to the card the words "drugs dispensed," while hardly to be looked on as unprofessional conduct, would certainly be regarded as unnecessary advertising. No doubt some county societies would consider such a card as entitling the owner to censure. 2. It would certainly be unprofessional conduct for a physician to advertise in the lay papers that "he would treat free of charge all patients calling at his office during certain hours or on certain days." No specious apparent justification of such a procedure can alter its true unprofessional character. It is right for any physician to arrange with his charity patients to call on him at a certain convenient hour. To advertise the fact in the newspapers would be highly reprehensible. To make all who can afford it pay for medical care is eminently proper, but the correct methods for attaining that end necessitate no advertising.

HOW LONG SHALL THE PUERPERA REMAIN IN BED?

————, ————, May 5, 1905.

To the Editor:—A physician who recently returned from a trip to Chicago has announced that he learned in a postgraduate school of that city how to conduct a labor by which the woman could be up and about in three days. Only as late as last year I had it drilled into me that the process of involution was a necessarily slow one, and required the recumbent posture for its most complete and perfect consummation. It has been my practice for years, with the physiologic processes of the postperineum in mind, to require my patients to keep in bed for ten days to two weeks after labor. I wish to know if any reputable teacher of obstetrics gets his patients out of bed three days after labor, and so teaches the physicians who come for postgraduate instruction. If such is the case, I want to know something about it.

X. Y. Z.

ANSWER.—Many obstetricians have come to the conclusion that the common practice of keeping a puerpera in bed from ten to fourteen days and then letting her get up for several hours at a time is not satisfactory. The long lying in bed without exercise is apt to produce disturbances of the digestion, excretion and circulation with weakened muscles and tender joints. When a patient so weakened and with disarranged functions gets up and remains up for some hours she generally has a return of the lochia, a backache and a feeling of weakness which is far from normal. Recently some obstetricians have thought to obviate this by letting the patient get up on the second or third day of the puerperium. This is in line with the practice of a few surgeons who have their laparotomy patients get up on the second or third day. There seems to be no danger to life in this practice, but the great balance of authority is still opposed to this extreme teaching, and probably will always be opposed to it. After the long strain of pregnancy a woman needs some rest, and the proper involution of the pelvic organs and of the abdominal walls is favored by the horizontal position. The objections to the prolonged rest in bed can be overcome by the employment of suitable bed exercises, such as those described in the paper by Bacon on "Massage and Exercise in the Management of the Puerperium," published in THE JOURNAL, Aug. 16, 1902. With such exercise a rest of seven to fourteen days is an advantage, and if the patient begins to walk and sit a little at a time and progress slowly she will make the safest and most satisf[illegible]scence.

MODIFICATION OF COW'S MILK.

Baltimore, May 2, 1905.

To the Editor:—Will you kindly inform me how to answer the following questions, which were given at the state board examination in Baltimore, June and December, 1904:

1. Write formula for a mother to use in home modification of cow's milk to yield the following proportions: Total quantity, 40 ounces; fats, 3 per cent.; proteids, 2 per cent.; sugar, 6 per cent.; alkalinity (expressed in limewater), 10 per cent.

2. About what percentage of fats, proteids and sugar should the following milk formula yield: Gravity cream, 5 oz.; skimmed milk, 5 oz.; sugar of milk, 1 oz.; water, a sufficient quantity to make 20 oz.

Kindly mention some text-books which may be consulted with reference to these questions. D. E. Ritter.

Answer:—Numerous formulæ and tables for use in percentage *modification of cow's milk have* been proposed by different writers, but many of these are somewhat complicated and hard to remember. Since the exact composition of milk and cream is rarely known and different specimens differ greatly, there can be only a rough approximation to accuracy. For house modification, *top milk or so-called gravity cream is generally used* unless cream of a certified composition can be obtained. The upper 6 to 7 ounces taken from a quart bottle of good milk, which was bottled shortly after milking, and for at least four hours has been kept cool contains about 16 per cent. of fat, while *it retains about the same proportion of proteids as whole milk.* With such a cream and with a good whole milk whose composition is about 4 per cent. fat, 4 per cent. proteid and 4 per cent. sugar, it is perhaps the simplest way to compute the formula required by the first question by means of simple algebraic equa*tions, as follows:*

Let x equal No. oz. of cream; y, No. oz. milk; z, No. oz. water.

Then $x + y + z = 40$ (1).

Since the percentage of fat in x oz. of cream is 16 and in y oz. of milk is 4 and in the mixture is 3, then:

$16x + 4y = 3(x + y + z)$ (2), or

$13x + y = 3z$ (3).

Since also the percentage of fat in both cream and milk is 4 and in the mixture 2, then:

$4x + 4y = 2(x + y + z)$ (4), or

$x + y = z$ (5).

Substituting the value of z in equation 1: $x + y = 20$ (6).

Also in equation 3 and we have: $5x = y$ (7).

Combining equations 6 and 7, we have: $x = 3\,1/3$.

Hence: $y = 16\,2/3$, and

$z = 20$.

To obtain 6 per cent. of sugar in the mixture, since both the cream and milk contain only about 4 per cent., we should need 2 per cent. of 20 oz. and 6 per cent. of 20 oz. to sweeten the water, which would amount to 1.6 oz. or about 10 level teaspoonsful *of milk sugar.* Ten per cent. of limewater would be, of course, 4 oz. The formula then would be:

3 1/3 oz. "gravity cream."
16 2/3 oz. of milk.
16 oz. of sterile water.
4 oz. of limewater.
Ten level teaspoonsful of milk sugar.

In the second question the proportion of cream, milk and water are 1, 1 and 2, hence:

	Fat.	Proteid.	Sugar.
Cream	16	4	4
Skimmed milk	½	4	4
Total	16½	8	8
Dividing by 4	4⅛	2	2

To 20 oz. of the mixture 1 oz. or 5 per cent. of milk sugar is added, which, combined with 2 per cent., makes 7 per cent. Hence the percentage of the food constituents is about 4 per cent. of fat, 2 per cent. proteids and 7 per cent. sugar.

The recent text-books on children's diseases contain certain directions on modifying milk, and we may also refer to recent monographs on "Infant Feeding" by Chapin and by Pritchard, and also to articles easily found from the Index to Current Medical Literature in The Journal, printed semi-annually.

State Boards of Registration

COMING EXAMINATIONS.

The Nebraska State Board of Health, Lincoln, May 31 and June 1. Secretary, George H. Brash, M.D., Beatrice.

Minnesota State Board of Medical Examiners, Old State Capitol Building, St. Paul, Minn., June 6-8. Secretary, C. J. Ringnell, M.D., Minneapolis.

Board of Medical Examiners of Wyoming, State Capitol, Cheyenne, June 7. Secretary, S. B. Miller, M.D., Laramie.

Michigan State Board of Registration in Medicine, The Capitol, Lansing, June 13. Secretary, B. D. Harison, M.D., Sault Ste. Marie.

State Board of Medical Registration and Examination of Ohio, Cleveland, Columbus and Cincinnati, June 13-15. Secretary, Frank Winders, M.D., Columbus.

Board Representing the President and Fellows of the Medical Society of Delaware, Dover, June 20-22. Board Representing the Homeopathic Medical Society of Delaware, Wilmington, June 20-22. Secretary of the Medical Council of Delaware, P. W. Tomlinson, M.D., Wilmington.

State Board of Medical Examiners of New Jersey, Trenton, June 20-21. Secretary, E. L. B. Godfrey, M.D., Camden.

Medical Examining Board of Virginia, Richmond, June 20-24. Secretary, R. S. Martin, M.D., Stuart.

Board of Medical Examiners of Maryland, Baltimore, June 21-24. Secretary, J. McP. Scott, M.D., Hagerstown.

Medical Council of Pennsylvania, Philadelphia and Pittsburg, June 27. Secretary of the Medical Council, H. C. Shaeffer, M.D., Harrisburg.

California April Report.—The Board of Medical Examiners of the State of California reports the written examination held at San Francisco, April 4-6, 1905. The number of subjects examined in was 9; total number of questions asked, 90; percentage required to pass, 75. The total number examined was 56, of whom 39 passed and 17 failed. The following colleges were represented:

PASSED.

College.	Year Grad.	Per Cent.
Northwestern Univ. Med. School, Ill. (1903) 80.6; (1901) 89; (1890) 83.5.		
Med. Dept. Univ of Cal (1904) 83.6, 80.8, 79.1,		81.1
College of Phys. & Surgeons, Chicago	(1902)	76
Jefferson Medical College, Philadelphia	(1885)	84.2
University Med. Coll. of Missouri	*(1904)*	75.1
American Medical Missionary College	(1904)	84.1
College of P. & S., New York	(1902)	87.3
Rush Medical College, Illinois	(1903)	87.3
Harvard Medical School (1896) 80.3;	(1898)	77.6
Cooper Medical College, S. F. *(1904) 82.2, 82.1, 82;*	*(1905)*	88.2
Coll. of P. & S., S. F. (1905) 80.1, 79.1, 75.8; (1904) 80.8,		75
Med. Dept. Univ. of Cal (1904) 83.6, 80.8, 79.1,		81.1
Coll. P. & S., Scotland	(1893)	80.3
Faculty of Medicine, Paris, France	(1905)	86.8
Hahnemann Med. Coll. of the Pacific. (1904) 81.5;	(1903)	75.4
University of Michigan (1902) 87.3;	(1901)	75
University of Minnesota	*(1901)*	78.2
University of Vermont	(1904)	77.4
Johns Hopkins Med. School	(1899)	82.8
Trinity University, Canada	(1904)	80.3
Washington University, Missouri	(1903)	75
Kentucky School *of Medicine*	*(1885)*	76.5
Homeopathic Medical College, Missouri	(1897)	83.3
Albany Medical College, New York	(1892)	82.5

FAILED.

College.	Year Grad.	Per Cent.
Univ. of Michigan (1892) 57.3;	(1872)	43.8
Rush Medical College	(1880)	42
Harvard Medical *School*	(1887)	68.1
Amer. Med. Missionary College	(1900)	67.6
Kentucky School of Medicine	(1890)	43.6
College of P. & S., S. F. (1904) 72.7;	(1905)	71.6
Bennett Medical College	(1895)	51.3
Hahnemann Med. Coll. of the Pacific. (1904 81.5;	(1903)	75.4
University of Pennsylvania	(1899)	64.1
Hering Medical College	(1897)	63.5
Laura Memorial Woman's College	(1903)	62
Cooper Medical College	(1903)	70.4
Central College of P. & S.	(1886)	64.7
Long Island College	(1885)	63.4
College of P. & S., *Chicago*	(1901)	68.2

Idaho April Report.—The secretary-elect of the Idaho State Board of Medical Examiners is Dr. J. L. Conant, Jr., *Genesee,* Idaho, who succeeds Dr. R. L. Nourse. At the written exam*ination* held at Boise, April 4, the number of subjects examined in was 12; total number of questions asked, 110; percentage required to pass, 75; number examined, 30, *of whom* 19 passed and 11 failed. The following colleges were represented:

PASSED.

College.	Year Grad.	Per Cent.
Chicago Med. Coll	(1877)	85.5
Rush Med. Coll (1903) 78.8; (1897) 82.7;	*(1902)*	*85*
Toronto Med. *Coll*	(1900)	90.5
Central Med. Coll	(1898)	86.2
Denver and Gross Med. *Coll.* (1903) 91.8; (1901) 86.7; (1903) 85.7.	(1905)	89.1
Illinois Med. *Coll*	(1901)	96.4
College of P. & S., Chicago (1902) 89;	(1898)	88.6
Trinity Med. Coll	(1901)	85.8
N. W. Woman's Med. Coll	(1899)	90.1
Chicago Homeo. Med. Coll	(1904)	82.6
University of Iowa (1904) 89.6,		85.6
University of Colorado	(1900)	81.8
Med. Coll. of Paris, France		

FAILED.

College.	Year Grad.	Per Cent.
Howard Med. Coll	(1892)	70.6
University of South	(1904)	73.6
College of *P.* & S., Chicago	(1895)	69.8
Rush Med. Coll (1890) 72.7;	*(1902)*	71.9

FAILED.

College.	Year Grad.	Per Cent.
Starling Med. Coll	(1877)	68.8
Barnes Med. Coll	(1893)	55
University of Nebraska	(1903)	68.7
Chicago Homeo. Med. Coll	(1879)	47.2
Bennett Med. Coll	(1900)	58.1
Ohio Med. Coll	(1889)	64.1

Indian Territory April Report.—Dr. B. W. Caldwell, secretary of the Board of Medical Examiners, Central District Indian Territory, reports the written examination held at South McAlester, April 4-6, 1905. The number of subjects examined in was 13; total number of questions asked, 130; percentage required to pass, 75. The total number of applicants examined was 29, of whom [illegible] Fourteen passed, of whom 11 were [illegible]. of whom 10 were undergraduates and 1 not a graduate, but licensed to practice in Texas and in Louisiana. The following colleges were represented:

PASSED.

College.	Year Grad.	Per Cent.
Fort Worth Univ. (undergraduates)		77, 86, 79
College of P. & S., Dallas	(1905)	76, 76, 75
Baylor University (undergraduates)		81, 75
Barnes Med. Coll. (undergraduate)		86
Coll. of P. & S., Kansas City (undergraduates)		75, 79
Coll. of P. & S., St. Louis (undergraduate)		75
Gate City Med. Coll. (undergraduate)		75
Memphis Hosp. Med. Coll (undergraduate)		81

FAILED.

College.	Year Grad.	Per Cent.
Atlanta Med. Coll	(1879)	71
Coll. of P. & S., Dallas (1905) 55; (undergraduates)		61, 71
University of Arkansas (1893) 53; (undergraduate)		73
Memphis Hosp. Med. Coll. (undergraduates)		72, 74, 73
Kentucky School of Med	(1901)	65
Fort Worth Univ. (undergraduate)		47
Baylor University (undergraduates)		73, 72
Gate City Med. Coll. (undergraduate)		74
No college; licensed in Texas and Louisiana		41

Kentucky April Examination Questions.—At the examination held by the Kentucky State Board of Health, April 25, the following questions were asked:

BACTERIOLOGY.

1. How do cells multiply? 2. What is a germicide? 3. How would you secure a pure culture of the *Bacillus typhosus?* 4. Give Koch's rules in regard to bacterial cause of the disease. 5. Describe the *Bacillus tuberculosis* and detail a method of staining it.

HYGIENE.

1. Define hygiene. 2. How would you manage a case of phthisis pulmonalis to avoid danger to the other members of the family? 3. How would you manage a case of scarlet fever to prevent its spread, and what precautions would you take to avoid conveying it on your own clothing or person? 4. What is the source and danger of carbon monoxid in living rooms? 5. What are the qualities desirable in water for drinking purposes?

PHYSICAL DIAGNOSIS.

1. Give the abnormal heart sounds and the point of greatest intensity of each. 2. Give method of examination in suspected pleuritic effusion. 3. Give physical signs and method of examination in ascites. 4. Give the landmarks for the colon. 5. Give the physical signs for chronic salpingitis.

ANATOMY.

1. Describe the great sciatic nerve. 2. Describe the hypoblast and mesoblast, and tell what structures are formed by each. 3. Describe one of the following bones: Femur, radius or astragalus. 4. Describe the circle of Willis. 5. Describe the deltoid muscle. 6. Give the principal points to which the pneumogastric nerve is distributed. 7. Describe the gross and minute anatomy of the kidney, and give relations of structures entering and leaving it. 8. Name the muscles of the gluteal region. 9. Describe Poupart's ligament. 10. Describe the foramen of Winslow.

OBSTETRICS.

1. Describe the mechanism of a normal labor. 2. Give symptoms, causes and treatment of acute mastitis. 3. Differentiate between pregnancy and fibroid of the uterus. 4. Give the cause and treatment of postpartum hemorrhage. 5. How would you diagnose and manage a breech presentation? 6. Give the method of determining the quality of the lacteal secretion. 7. Give the diagnosis and treatment of fetal death in utero. 8. Give cause, diagnosis and treatment of puerperal eclampsia. 9. Give indications for and methods of podalic version. 10. Give prognosis for mother and child in placenta prævia.

SURGERY.

1. What is epistaxis? Give causes. How would you treat it? 2. Give the most common seat of fracture of the lower jaw and the treatment. 3. Give the general points of difference between malignant and non-malignant tumors. 4. Give the symptoms, methods of diagnosis and treatment of an enlarged prostate. 5. What are the varieties of fistula in ano? Give treatment. 6. Give the classification of aneurisms and tell how spontaneous recovery may occur. 7. What is a sprain and tell what tissues are involved. Give treatment for sprained ankle. 8. Give causes and treatment of varicose veins of lower extremity. 9. How may a fatty embolism of the kidney occur after a fracture? 10. Describe a carbuncle and give treatment.

PHYSIOLOGY.

1. Describe the various kinds of blood corpuscles, their origin and function. 2. Name the principal digestive enzymes and their functions. 3. Describe a cardiac cycle and give the phenomena attending it. 4. Describe the reflex centers. 5. Give the function of the skin. 6. Give the functions of the lungs, describing the various processes. 7. Give the physiology of vision. 8. Describe the lymphatic system, giving its functions. 9. How is animal heat produced, preserved and dissipated? 10. Describe the different kinds of muscular tissue and mode of action of each.

PATHOLOGY.

1. What diseases are attended with cardiac hypertrophy? 2. Describe the pathologic changes in hip-joint disease. 3. Describe the pathology of acute miliary tuberculosis. 4. Give the pathology of various forms of goiter. 5. Give the pathology of arteriosclerosis. 6. Give the pathology of the different forms of pleurisy. 7. What diseases are attended with ulceration of the intestines? 8. What general pathologic lesion characterizes chronic alcoholism? 9. Give the pathology of rickets. 10. What is a parasite? A saprophyte?

CHEMISTRY.

1. Mention ten elements, giving symbol, anatomic weight and valancy of each. 2. What is sulphur? How is it obtained? Give test for it. 3. How many kinds of heat? Describe them. 4. Give tests in detail for albumin in urine; sugar. 5. Define the meaning of the prefixes hypo-, proto-, bi- and per- in chemical nomenclature. Give examples. 6. Name the alkaline metals. 7. What are alcohols? How classified? Give an example of each class. 8. How determine the presence of organic matter in water? 9. What are acids? What are salts? How is each produced? 10. Give Marsh's test for arsenic.

OPHTHALMOLOGY.

1. Give the cause and symptoms of ophthalmia neonatorum. 2. Describe the iris. 3. What is the treatment for ptosis of the eyelid? 4. (a) How would you detect a foreign body in front of the lens? (b) Behind the lens? 5. Diagnose cataract.

OTOLOGY.

1. Give symptoms of acute otitis media. 2. Give diagnosis of mastoid abscess. 3. What ear symptoms indicate fracture of the skull? 4. Give diagnosis and treatment of eczema of the external auditory canal. 5. What ear complications may result from tonsillitis?

MEDICAL JURISPRUDENCE, MENTAL AND NERVOUS DISEASES.

1. What is malpractice? 2. How would you distinguish human blood stains on clothing? 3. What are the symptoms of poisoning by wood alcohol? 4. When is abortion legally justifiable? 5. How would you differentiate between (a) narcotic poisoning; (b) drunkenness; (c) uremia and (d) concussion? 6. Differentiate between hysteria and melancholia. 7. Name and define two forms of insanity. 8. What mental conditions render a testator capable of making a will? 9. How would you distinguish between a male and a female skeleton? 10. Differentiate between infantile paralysis and idiocy.

GYNECOLOGY.

1. How would you proceed to find whether a woman whom you had just delivered had a lacerated perineum, and how would you repair it? 2. How would you diagnose and treat acute gonorrhea in the female? 3. What are the most common benign growths found in the cavity of the uterus; causes, symptoms and treatment? 4. What would you suspect in a woman of fifty with a slight, constant, bloody uterine discharge, and how would you confirm or disprove your diagnosis? 5. How would you diagnose and treat ectopic gestation?

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending May 13, 1905:

Reno, Wm. W., asst.-surgeon, relieved from temporary duty on transport *Sumner*, and will return to his proper station at Fort Myer, Va.

Palmer, Fred W., asst.-surgeon, returned to U. S. Rifle Range, Arcadia, Mo., from detached duty at Jefferson Barracks, Mo.

Smith, Herbert M., asst.-surgeon, reported at Fort McDowell, Cal., for temporary duty.

Ashford, B. K., asst-surgeon, reported at Aibonito, P. R., on special duty with the governor of Porto Rico.

Mason, Chas. F., surgeon, appointed member of board of officers to select site for new Army post in the vicinity of Buffalo, N. Y.

Rhoads, Thos. L., asst.-surgeon, left West Point, N. Y., on ten days' leave of absence.

Baily, Howard H., asst.-surgeon, left Fort Myer, Va., on ten days' leave of absence.

McCulloch, C. C, Jr., surgeon, granted ten days' leave of absence.

Wadhams, S. H., asst.-surgeon, on being relieved from duty on transport *Logan*, ordered to Alcatraz Island, Cal., for duty.

Fauntleroy, P. C., asst.-surgeon, granted twenty days' leave of absence.

Maus, Louis M., deputy surgeon general, ordered to Fort Logan H. Roots, Ark., Forts Reno and Sill, O. T., on inspection duty.

Owen, Wm. O., surgeon, relieved from treatment at Army and Navy General Hospital, Hot Springs, Ark., and ordered to join proper station, Fort Logan, Colo. Same order grants him three months' sick leave of absence.

Truby, A. E., asst.-surgeon, relieved from duty at Alcatraz Island, Cal., and ordered to Presidio of San Francisco for duty with Company B, Hospital Corps. Granted ten days' leave of absence.

Havard, Valery, asst.-surgeon general, returned to duty as chief surgeon, Department of the East, from detached duty.

Marrow, Chas. E., asst.-surgeon, left Fort Sheridan, Ill., on thirty days' sick leave of absence.

McAlister, John A., dental surgeon, arrived at Presidio of Monterey, Cal., for duty.

Daywalt, George W., contract surgeon, arrived at Jackson Barracks, La., for temporary duty.

McCallum, Francis M., contract surgeon, returned to his proper station, Fort D. A. Russell, Wyo., from temporary duty at Fort Washakie, Wyo.

White, J. Samuel, contract surgeon, returned to station, Fort Snelling, Minn., from Camp Lakeview, Minn.

Holmes, Thomas G., contract surgeon, returned to Fort Wayne, Mich., from leave of absence.

Navy Changes.

Changes in the medical corps, U. S. Navy, for the week ending May 13, 1905.

Hull, H. F., asst.-surgeon, detached from the *Franklin* and ordered to the Naval Hospital, Philadelphia.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and noncommissioned officers of the Public Health and Marine-Hospital Service for the seven days ending May 10, 1905:

Pettus, W. J., asst.-surgeon general, granted leave of absence for two days from May 4.

Carrington, P. M., surgeon, detailed to represent the service at meeting of the American Association for the Study and Prevention of Tuberculosis at Washington, D. C., May 18-19.

Lumsden, L. L., P. A. surgeon, relieved from duty at Philadelphia, directed to proceed to Baltimore and to report to commanding officer of United States practice ship *Chase* for temporary duty.

Billings, W. C., P. A. surgeon, relieved from duty at Quebec, Canada, directed to proceed to Seattle, Wash., and to report to commanding officer of the United States steamer *Perry* for temporary duty.

Kerr, J. W., P. A. surgeon, relieved from duty at Ellis Island, N. Y., directed to proceed to Quebec, Canada, for duty in office of the United States Commissioner of Immigration.

Robinson, D. E., P. A. surgeon, relieved from duty at Port Townsend Quarantine, directed to proceed to San Francisco and to report to commanding officer of United States steamer *Manning* for temporary duty.

Holt, J. M., P. A. surgeon, granted leave of absence, on account of sickness, for twenty-three days.

Foster, J. P. C., acting asst.-surgeon, granted leave of absence for ten days from April 17.

Stanton, J. G., acting asst.-surgeon, granted leave of absence for eight days from May 10.

Gahn, Henry, pharmacist, to report at Washington, D. C., for special temporary duty.

Brock, G. H., pharmacist, granted leave of absence for thirty days from May 18.

Troxler, R. F., pharmacist, to report to medical officer in command, Marine Hospital, Port Townsend, Wash., for temporary duty.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, Public Health and Marine-Hospital Service, during the week ended May 12, 1905:

SMALLPOX—UNITED STATES.

California: *Los Angeles, April 15-22, 1 case*; San Francisco, April 22-29, 2 cases.

District of Columbia: Washington, April 30-May 6, 7 cases.

Florida: Jacksonville, *April 30-May 6, 8 cases.*

Illinois: Chicago, April 30-May 6, 13 cases, 3 deaths.

Kentucky: Covington, April 30-May 6, 1 case; Lexington, April 22-29, 1 case.

Massachusetts: Boston, April 30-May 6, 1 death.

Michigan: Grand Rapids, April 22-May 6, 47 cases, 5 deaths.

Missouri: St. Joseph, April 30-May 6, 20 cases; St. Louis, May 1-8, 11 cases, 2 deaths.

Ohio: Cincinnati, April 29-May 5, 8 cases; Toledo, *April* 22-May 6, 7 cases.

Pennsylvania: Lebanon, April 30-May 6, 3 cases.

Wisconsin: Appleton, May 1-8, 4 cases, 1 death; La Crosse, April 22 29, 1 case.

SMALLPOX—INSULAR.

Hawaii: Honolulu, April 24, 1 case on steamship *Coptic* from Oriental ports.

SMALLPOX—FOREIGN.

Africa: Cape Colony, March 25-April 1, 1 case; Monrovia, March 4-11, 10 cases, 2 deaths.

Brazil: Pernambuco, March 15-31, *240 deaths*; *Rio de Janeiro*, April 2-9, 3 cases, 5 deaths.

Ecuador: Guayaquil, April 11-18, 3 deaths.

France: Paris, April 15-22, 11 cases.

Great Britain: Bradford, April 1-22, 10 cases; April 15-22, Cardiff, 1 case; New Castle-on-Tyne, 1 case; Nottingham, 4 *cases*; Southamptom, 2 deaths among cases *previously reported*; South Shields, 2 cases.

India: Bombay, April 4-11, 86 deaths; Calcutta, April 1-8, 6 deaths; Karachi, April 2-9, 15 cases, 6 deaths; Madras, April 1-7, 9 deaths.

Italy: Catania, April 6-27, 4 deaths.

Norway: Christiania, April 8-15, 1 case.

Russia: Moscow, April 8-15, 5 cases; Odessa, April 15-22, 5 cases, 3 deaths; St. Petersburg, April 1-15, 24 cases, 7 deaths.

Spain: Barcelona, April 10-20, 10 deaths.

Straits Settlements: Singapore, March 18-25, 2 deaths.

YELLOW FEVER.

Panama: Colon, Jan. 23-April 2, 6 cases, 3 deaths; Panama, Jan. 1-April 29, 50 cases, 20 deaths.

CHOLERA.

India: Calcutta, April 1-8, 58 deaths.

PLAGUE.

Africa: Cape Colony, March 25-April 1. 5 cases, 1 death.

Arabia: Aden, April 7-14, 6 cases, 5 deaths.

India: General, March 25-April 1, 65,000 cases, 57,702 deaths; Bombay, April 4-11, 763 deaths; Calcutta, April 1-8, 712 deaths; Karachi, April 2-9, 104 cases, 176 deaths; Rangoon, to April 11, 500 cases, 380 deaths.

Mozambique: Govura, Feb. 2, present.

Society Proceedings

COMING MEETINGS.

American Medical Association, Portland, Ore., July 11-14, 1905.

Medical Society of the State of N. Carolina, Greensboro, May 23-25.
Connecticut Medical Society, Hartford, May 24-25.
North Dakota State Medical Society, Grand Forks, May 24-25.
West Virginia State Medical Association, Wheeling, May 24-26.
American Gynecological Society, Niagara Falls, N. Y., May 25-27.
Rhode Island Medical Society, Providence, June 1.
Arizona Medical Association, Prescott, June 1-2.
Minnesota State Medical Society, St. Paul, June 1-2.
American Laryngological Association, Atlantic City, June 1-3.
American Laryn., Rhin. and Otol. Society, Boston, June 5-7.
American Orthopedic Association, *Boston*, June 6-8.
Indiana State Medical Association, West Baden, June 7-9.
Maine Medical Association, Portland, June 7-9.
Wisconsin State Medical Society, La Crosse, June 8.
Amer. Assn. of Genito-Urinary Surgeons, Montreal, June 13-14.
Massachusetts Medical Society, Boston, June 13-14.
American Pediatric Society, Lake George, N. Y., June 19-21.
Medical Society of *New* Jersey. *West End, June* 20-22.
Indian Territory Medical Association, Tulsa, June 20-22.
American Climatological Association, Detroit, Mich., June 28 29.
Michigan State Medical Society, Petoskey, June 28-30.

STATE MEDICAL ASSOCIATION OF TEXAS.

Thirty-Seventh Annual Meeting, held in Houston, April 24-28.

The President, Dr. Ferdinand E. Daniel, Austin, in the Chair.

President's Message.

At the meeting of the house of delegates the president submitted his annual message and recommendations in which he mentioned especially the earnest and sustained, but unsuccessful, efforts to secure legislation in the interest of science and public health; the outrageous veto of the anatomic bill; and referred to the bill for the formation of the State Board of Health to be presented to the next legislature, which covers the ground of sanitary science, renders unnecessary special acts regulating the sale of patent medicine, narcotics and other poisons and adulterated foods, drinks and drugs; prevents the pollution of water supplies; provides for the disinfection of public buildings, cars, etc., and regulates the practice of medicine and the licensing power. He recommended the affiliation of the state association of dentists with the medical association and the creation of a section on stomatology and oral surgery; the passage of a by-law directing the appointment of eighteen members by the association from whom the state board of medical examiners should be selected; provision for the election of trustees and the definition of their duties; definition of the duties, powers and limitations of councilor district societies, and the continuation of the publication of the transactions in book form.

Reports of Secretary and of Treasurer.

The secretary reported a membership of 2,436, and stated that Texas ranks seventh in the list of states in the number of its physicians; fifth in the membership of state societies, and twelfth in the percentage of membership to the total number of physicians. Seven new county societies have been added during the year with a total membership of eighty-six. He recommended the establishment of a state journal and gave in detail his arguments therefor.

The treasurer's report showed a balance of $5,060 in the treasury.

Welcome.

At the opening session of the association Hon. C. R. Wharton welcomed the visiting physicians on behalf of the City of Houston; Dr. E. N. Gray, president of the Harris County Medical Association, on behalf of that body, and Dr. Samuel C. Red on behalf of the physicians of Houston.

State Journal Adopted.

After a very lively discussion the house of delegates voted to abolish the "Red Book," the annual volume of transactions, and to make the *Texas State Journal of Medicine* the official organ.

History of the Association.

Dr. Robert H. Harrison, Columbus, chairman of the committee on collection and preservation of records, documents and data of value to the association, made an interesting report of the early history of the association.

Board of Medical Examiners.

Dr. J. T. Wilson, Sherman, president of the board, after giving the number of applicants for examination for certificates as physicians and the results of the examination, reported the defeat in the legislature of the bill embracing the amendments to the medical acts recommended by the board in 1904. The clause which exempts the so-called "drugless doctors" was the cause of its defeat.

Annual Addresses.

President Daniel delivered the annual address on "Sentiment and Science," and Dr. Jarrette D. Law, Belton, the annual oration on "The Physician and the Humanities."

Tuberculosis in Texas.

Dr. Matthew M. Smith, Austin, chairman of the section of state medicine and public hygiene, called attention to the fact that Texas lacks means for the prevention of the spread of tuberculosis. He urged the necessity of the establishment of an institution for the care of indigent consumptives that they may be removed from public places where their presence is a menace to the public health. The general public is sorely in need of instructions as regards tuberculosis, and greater care should be taken to prevent the further spread of the disease. The public should be educated to the observance of anti-spitting, and school children should be guarded from infection.

Election of Officers.

The election of officers resulted as follows: President, Dr. J. Edward Gilcreest, Gainesville; vice-presidents, Drs. Marvin B. Grace, Seguin; Thomas A. Rape, Ballinger, and Oliver I. Halbert, Waco; trustees, Dr. William R. Thompson, Ft. Worth; John S. Lankford, San Antonio; Charles E. Cantrell, Greenville; William C. Blalock, Dallas, and Samuel C. Red, Houston; councilors, Dr. Luther A. Grizzard, Abilene, second district; Dr. Thomas J. Bennett, Austin, seventh district; Dr. Green L. Davidson, Wharton, eighth district; Dr. John T. Moore, Galveston, ninth district, and Dr. Benjamin F. Calhoun, Beaumont, tenth district. The secretary and treasurer were elected in 1904 for a term of three years.

Fort Worth was selected as the next place of meeting.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Regular Meeting, Thursday, March 2, 1905.

The President, Dr. Richard C. Norris, in the Chair.

Indications for the Slow Induction of Premature Labor.

Dr. William R. Nicholson mentioned the rarer indications, such as insanity, nervous diseases, blood diseases, etc., but limited himself to the most common indications, namely: Contracted pelves, placenta prævia, heart disease, tuberculosis and toxemia. While admitting that the rapid methods of delivery may very rarely be indicated in the treatment of some of these conditions, he expressed the belief that such indications are most unusual. Thus, in placenta prævia, there might be an indication found for Cesarean section, if a primipara presented a condition of alarming hemorrhage together with rigid cervix; but, in the vast majority of the cases of this abnormality, no such indications existing, the Cesarean operation has no place. In particular, all rapid methods of cervical dilatation by means of the dilators of Bossi and Seigveaux should be avoided, unless the attendant is experienced in the use of such instruments. He is even more strongly opposed to the rapid methods of delivery in the presence of eclampsia. Cesarean section has absolutely no place here. He believes in the great value of the premature termination of pregnancy in the presence of certain grades of pelvic deformity, but is doubtful as to its utility in the presence of tuberculosis of the lung, or cardiac disease, unless in the case of the latter the cause of the alarming symptoms is felt to be due to mechanical pressure of the uterus.

The Indications for Accouchement Force.

Dr. George M. Boyd said that there are two varieties of forced delivery: "(a) The rapid method, which Zincke states represents the class of cases in which the condition of the mother, and sometimes that of the child, demands a prompt and rapid termination of the pregnancy; and (b) the slow method, representing those cases in which the delivery of the child may be effected slowly, because of the absence of immediate danger to the mother, and the existence of a justifiable disregard of the life of the fetus." He described the two steps in the operation: (1) Dilatation of the lower uterine segment and cervix by stretching, tearing or cutting. (2) Removal of uterine contents manually or by resorting to instrumental interference. Dr. Boyd has found the method of manual dilatation the most satisfactory, especially in treating eclampsia.

A Relatively Rapid Method for Terminating Pregnancy.

Dr. Richard C. Norris said that nature's mechanism of dilatation of the cervix should be initiated by any method of artificial dilatation. The longitudinal fibers of the uterus exert a direct pull upward of the lower uterine segment and, assisted by the downward push of the hydrostatic pressure of the bag of waters, and later of the presenting part of the fetus, the lower segment is dilated, the internal os is opened and drawn upward, the surface thus being attenuated and effaced. Mechanical stretching and thinning is not physiologic dilatation, and explains the lacerations so frequent after rapid and complete mechanical dilatation. For two years Norris has used a method combining the use of the bougie, partial mechanical dilatation, to an extent not endangering the cervix (5-7 cm.), followed by the introduction of a very large bag of the Voorhees type (capacity 600 c.c.), which, when completely distended with 480 c.c. of water, supplies an artificial bag of waters. Continuous or intermittent traction on the bag may be employed when dilatation is inordinately slow. In 35 cases of induced labor for the lesser degrees of pelvic contraction, terminated either spontaneously or by forceps or version, the older method of a bougie followed by a bag, required an average of 27½ hours. In 52 cases by the same method, the indications being toxemia, grave kidney, cardiac and pulmonary diseases, chorea, pernicious nausea, etc., the average duration, there being a larger number of spontaneous deliveries, was 34 hours. In 18 cases in which the bag and bougie were preceded by partial instrumental dilatation, the dilator being both dilator and bag-introducer, devised by himself, the average duration of labor was 8 1/5 hours for cases terminated by forceps or version and 16½ hours for spontaneous deliveries, an average duration of 12 1/3 hours for spontaneous deliveries and 5½ hours for labors terminated by version or forceps.

Methods of Inducing Labor.

Dr. Barton Cooke Hirst said that since de Ribes advocated the use of his bag for inducing labor, it has been a disputed point whether the old plan by bougies or the newer one by the inelastic bag in the lower uterine segment is preferable. He has given both methods an extensive trial, with the result that he found the bougie method the easier for the patient and operator, and if properly used, about as efficient as the bag. He gave the following statistics, and though they do not represent his total experience, the number is sufficient for the drawing of conclusions:

Induced labor by bougies alone, 174. The child was born in less than six hours after the introduction of the bougies in eight cases; between six and twelve hours in 23; between 12 and 18 hours in 33; between 18 and 24 hours in 15; between 24 and 30 hours in 11; between 30 and 36 hours in 23; between 36 and 42 hours in 11; between 42 and 60 hours in 12, and in more than 60 hours in 2, the longest time recorded being 62 hours. There were 36 cases in which the time was not recorded. In 81 per cent. of 138 cases, therefore, the child was born in less than 36 hours from the time the bougies were introduced.

Induced labor by bags alone, 23. The child was born in less than six hours after the insertion of the bags in two cases; between 6 and 12 hours in 3; between 12 and 18 hours in 3; between 18 and 24 hours in 7; between 24 and 36 hours in 6; between 36 and 42 hours in 1; between 42 and 60 hours in 2; over 60 hours 1. The longest time record was 91 hours. In five cases the time was not noted. The delivery was accomplished under 36 hours in 83 per cent.

Labors induced by bougies and bags, 11. The time required was considerably over 24 hours in all, because much time was allowed the bougies before the bags were used. In one of these cases, 96 hours were required, and even then, in spite of the fact that the full sized Champetier de Ribes bag passed spontaneously out of the cervix, there were no pains, and the fetus was extracted from the uterus by its foot. In the cases in which Bossi's dilator was used or vaginal hysterectomy was performed delivery was naturally promptly concluded.

In Hirst's experience, the bougie method best meets the desired requirements, viz., the minimum of discomfort and risk for the patient, and the least trouble and shortest length of time for the physician. In private practice, before leaving his office the physician puts two bougies, size 17 French, in a long glass tube, filled with water into which a mercuric chlorid tablet is dropped, and the tube corked. By the time he arrives at the patient's house, the bougies are sterile. Before the bougies are put in, one or two fingers should be inserted through the cervical canal and swept around the lower uterine segment to separate the membranes. A small tampon of iodoform gauze is placed in the vagina after the bougies are inserted. The physician is notified when the pains become strong and active. He makes no examination and does not remove the vaginal packing or the bougies, until expulsive pains begin, simply devoting the time and attention required in an ordinary labor case, plus about 15 minutes or less, for the insertion of the bougies. The patient has to endure the usual suffering of an ordinary labor, plus the scrubbing of the vagina. She does not feel the introduction of the bougies. In more than four-fifths of the cases she is delivered easily after a labor of average length. He thinks any more complicated or active treatment to bring on labor unnecessary. In many instances patients respond extraordinarily well to this simple plan. In 64 out of 138 cases the child was born in less than 18 hours from the time the bougies were inserted.

In contrasting the bag method with the bougies, Dr. Hirst said the bags must be boiled; their insertion is usually painful; and, if a large one is used, preliminary instrumental dilatation of the cervix is required, for which the patient ought to be anesthetized. After the insertion it is customary to have the nurse pull on the tube attached to the bag every ten or fifteen minutes; this, with the pressure of a large foreign body in the lower uterine segment, adds to the pains of labor. The physician usually has to make frequent examinations to be sure that the bag has not been expelled from the uterus, and to detect the degree of dilatation of the os, thus increasing the risk of infection. The bags do not remain sterile; the Voorhees bag, commonly used in America, quickly becomes foul. In some of his cases the nurse has pulled the bag out prematurely or has pulled the tubing off the bag, necessitating a reinsertion; and in one case a head presentation was converted into a shoulder presentation by the largest size Voorhees' bag. In about a fifth of the cases, or in about the same proportion as with the bougies, delivery is not secured in 36 hours, and something else must be done. Thus the question arises how to manage an induced labor if the bougies or bags fail. Dr. Hirst's present preference is to insert two bougies and wait twenty-four hours; if there are no labor pains by that time, there is at least always a marked softening and elasticity of the cervix. The patient may then be anesthetized and placed on an operating table. With Bossi's dilator, the cervical canal is dilated slowly to 6 or 7 cm. Up to this point there is no danger of injuring the cervix. A forceps is then applied and the child extracted, the whole process taking about thirty-five minutes. He has induced labor by this plan six times. The woman suffers not at all in her labor. She has not felt labor pains and knows nothing about the delivery. If there is a moderate laceration of the cervix or pelvic floor, the injuries are repaired in the puerperium and there are no permanent bad consequences. He thinks there is no reason for the prejudice against Bossi's dilator exhibited frequently by those who have had no experience with it. He has used the instrument twenty-five times, nineteen times for *accouchement forcé.* The only serious lacerations of the cervix have occurred in women delivered in less than twelve minutes. At first the instrument was used in this way for desperate cases of eclampsia, and even in them there was no dangerous laceration. With a slow dilatation, twenty minutes or more, up to 6 or 7 cm., there was not much more danger of lacerated cervix than in the average labor.

If the cervix is not easily dilated with Bossi's dilator after the bougies have been in place twenty-four hours, a slow dilatation with bags, or a rapid delivery by hysterectomy is available. He thinks Norris' proposition deserves careful attention. It is to dilate the cervix up to 7 cm. with an improved and modified Gau dilator, then to insert bougies and the largest sized Voorhees bag, partially filled with water. But even with this combination of all the plans of inducing labor, an apathetic uterus demands operative delivery, in addition, just as it does with bougies alone, bags alone, or both together, and in four-fifths of the cases bougies alone would be enough without the extra trouble and discomfort entailed by the other method. Nevertheless, Norris' technic is an excellent one and will often be useful, especially in cases at a distance where the consultant will be detained until the labor is over.

DISCUSSION.

Dr. W. Reynolds Wilson's experience in the induction of labor has been mostly confined to cases of threatened eclampsia and placenta prævia. He has had more or less experience with induction of labor for contracted pelves. In his opinion there are two classes of cases to be considered in the induction of labor. One is that which not only yields readily to the bougie, but to careful packing of the cervical canal and vagina, which he considers a very important adjunct to the use of the bougie. In another class of cases, introduction of the bougie will not cause softening of the cervix or promote uterine contraction. He believes that there is never any dilatation of the cervix without a corresponding degree of contraction in which the whole uterine organ takes place. With this in mind mechanical dilatation in most cases will be shown to be absolutely unnatural. There is, he said, a set of cases in which the cervix is elongated and in which the reflexes are absent, where the bougie is absolutely ineffective, and where he would imagine also the bag would be ineffective. The only possible way to induce dilatation in these cases is to attempt to soften the cervix by careful packing, then by manual dilatation afterwards, making allowance for the fact that time is the most essential element in the procedure. These undilated cases will always remain difficult cases, and it is a mistake to believe that they must be treated by methods of successive mechanical dilatation, because the prolonged treatment and the want of observance of the proper precautions against infection will probably all be against the interest of the patient. Wilson has noticed in certain cases, where it has been necessary to induce labor, that the unyielding quality of the cervix is very often accompanied with a condition of cervical gonorrhea. These cases are apt to be followed by symptoms of local infection and by chronic subinvolution.

He believes also that it would be well to call attention to the shock which accompanies *accouchement forcé* in these cases. The eclamptic cases are those which yield most quickly to dilatation. They are not the cases in which to perform *accouchement forcé.* When rapid dilatation is spoken of, it may be that procedure is meant, but where the eclamptic attack has really come on, the chances are that the labor can be carried on rather promptly. The rapid termination of labor in eclampsia is conservative treatment. In order to cure an eclamptic patient she must first be relieved of her pregnancy. The most modern theory of eclampsia rather explains that; that is, that the syncytial tissue finds its way into the maternal circulation causing to be created in the serum a corresponding and compensating antidote to the poison which has been described by the Germans as syncytiolysin. If this compensatory or overcoming serum is not sufficiently produced, then the poison is not counteracted. On the other hand, if the antidote is produced in too great an amount to be neutralized, it in turn acts as an irritating toxin. If it is a sound theory, as soon as the syncytial tissue ceases its activity, the patient should be relieved of the poison; and, therefore, emptying the uterus rather favors not the elimination of the poison, but the cessation of its production.

Dr. O. Hopkinson, Jr., considered all methods of interfering with pregnancy dangerous and only to be undertaken with an appreciation of the responsibility attached. The choice of the methods, he thinks, should be determined after a careful study of the case, as every case is a law unto itself. He prefers *accouchement forcé* in all cases in which the cervix has been previously dilated, that is, in multiparæ. He uses the Goodell dilators to the full extent, and then the Harris or Edgar method and delivers by version or forceps or allows spontaneous termination, as the occasion demands. If there is no need or haste, he prefers the bougie, or packing with gauze. Both of these methods he considers uncertain, and if the patient shows signs of fever or rapid pulse, he terminates by *accouchement forcé*.

Dr. Stricker Coles believes many cases are best treated by the induction of labor. In the cases where the child is too large for the pelves, if pregnancy is allowed to go to term, the fitting of the child's head to the mother's pelvis is the best index as to the time for the induction of labor. If this shows that labor should be induced before the thirty-second week, then it would be better to consider some other method of treatment. While the bougie has given good results in a large number of cases, it should be removed when labor pains become strong and regular, for when it is allowed to remain there is danger of premature rupture of membranes. This accident has not occurred, except in cases where it was left in too long. When the membranes have not ruptured, labor should be allowed to proceed normally and with as little interference with nature as possible.. If the membranes rupture prematurely, then insert the bag exhibited by Norris, which is large enough to give sufficient dilatation to deliver the child and with slight lacerations to cervix or pelvic floor. The Bossi dilator must be used with care in completing the dilatation as there is more danger of causing lacerations at that time. When obliteration of the cervix has not taken place, the Bossi dilator is a dangerous instrument if used to dilate rapidly, and under no circumstances should the cervix be dilated in less than half an hour. He thinks the operation of induction of labor is useful and will be successful if the cases are carefully studied and scientifically treated.

Dr. Nicholson said, in regard to the etiology of eclampsia, that in the majority of cases structural changes are found in the kidneys and liver; that they may, however, be only microscopical; that there is some poison circulating in the mother's system and she is autotoxic. He fails to see what use there is in doing anything approaching *accouchement forcé* or any rapid method of delivery in a case of eclampsia. The woman is depressed by the toxins, and the question of a few hours will not make any difference in her life. While it is true that statistics show that a woman who does not become eclamptic until after her delivery is in very much less danger than if convulsed before delivery, nevertheless there is a distinct mortality in this period, and the mere fact of rapid delivery does not put a gestational case into the puerperal class. Therefore, he does not see any reason for the rapid delivery eclampsia. He believes the slow method is the method of value here.

Dr. Richard C. Norris remarked that he would not like it understood that the method he described is the one he would use under all circumstances. He thinks the character of the indication for the induction of labor and the condition of the patient determines largely the method that should be used. For a case with no necessity for a short labor, if the bougie fails, he dilates the cervix mechanically and follows with dilatation by the bag. The method described has enabled him to terminate labor in 8½ hours, and is sufficiently rapid for all the complications he encounters. In cases of heart disease, eclampsia or placenta prævia, where it is to the best interest of the patient to be delivered rapidly, he uses this method in preference to the Bossi dilator or vaginal hysterectomy. It is a relatively rapid method for the termination of pregnancy, and when in the obstetrician's judgment eight or ten hours is sufficiently rapid, it is the method of choice. He could not recall a case where a more rapid delivery seemed to be necessary.

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

Pains of Tabes.

Gowers, in *British Medical Journal*, states that the pains in tabes can be greatly relieved but can not be entirely eliminated. The exacerbations of pain do not indicate a necessary increase of the morbid process as these conditions are susceptible to gouty, rheumatic and digestive derangements. Local measures are of service in relieving the more superficial pains such as chloroform sprinkled on lint and covered with oil silk. Hypodermic injections of cocain at the upper portions of the area over which the pain is felt, administering gr. ⅛ to ¼ (.008-.015) usually stops the pain for an hour or two. Or it may be administered by cataphoresis, using a 6 to 10 per cent. solution and placing it on the anode of the galvanic current. Within a few minutes the area over which it is applied has lost its response to touch and pain. The effect continues for about twice the length of time the current has been applied.

The deeply located pains are relieved only by internal treatment, which, of course, is of service in the superficially located pains. The author recommends the coal-tar derivatives as of most value for these pains. Phenacetin and acetanilid are of great value, unless the pains are severe. Acetanilid is the more effective, and asserts its value more when given in a single large dose, and at the beginning of the attack rather than when the pains have become well developed. In the latter instance morphin may have to be given before relief is obtained, but should never be used at the discretion of the patient.

Not only to decrease the frequency of the attacks, but to diminish the severity of the pain, the author recommends aluminum chlorid in doses of five to ten grains (.30-.65) three times a day. It is readily soluble in water. He recommends also, as worthy of trial, the use of ammonium chlorid, which acts similarly, but less actively. Similar effects may be produced by the alkaline salicylates and by aspirin; the latter should be suspended in mucilage or given in capsule. These latter agents are of service, especially in those attacks of pain brought on by changes in the weather.

Cirrhosis of the Liver.

In hypertrophic cirrhosis of the liver the *Medical Press* recommends belladonna, arsenic and mercurial preparations, especially calomel administered in doses of gr. 1/5 (.012) daily for one week, after which the following outline of treatment is recommended:

℞. Sodii arsenatis ....gr. i |06
Aquæ ....℥x 300|
M. Sig.: One tablespoonful morning and evening.

If ascites is present the following:

℞. Theobromin ....gr. xxx 2|
Sodii phosphatis ....gr. xxx 2|
M. Ft. chart. No. iii. Sig.: One powder every hour and repeated daily for three days. Or:

℞. Pulv. scillæ
Pulv. digitalis
Pulv. scammonii, āā....................gr. i |06
M. Ft. pil. No. i. Sig.: One pill thrice daily.

In the atrophic form the following is recommended:

℞.	Potassii iodidi	ʒi	4	
	Strych. sulph.	gr. ss		03
	Aquæ	℥x	300	

M. Sig.: One tablespoonful twice a day; and:

R.	Sodii benzoatis	gr. v	30
	Sodii phosphatis	gr. x	65
	Pulv. jaborandi fol.	gr. ii	12

M. Ft. wafer No. i. Sig.: One wafer to be taken three hours after meals.

A pill containing aloes should be taken at bedtime.

As to the diet, attention is called to the fact that albuminoid substances produce the most stimulating effects on the liver, consequently meat should be eliminated from the diet when the liver is affected. Vegetable albuminoids, milk and eggs may be allowed, as they produce less toxic effect. Fats as a class are non-indicated, but vegetable oils and fresh butter are permissible. Milk is the best article of diet. Green vegetables, such as peas, haricots and artichokes, are permissible, but spinach, cabbage, turnips and radishes should be restricted. Alcohol, coffee and chocolate should likewise be excluded from the diet list.

Hemorrhoids.

According to T. C. Hill, in *Boston Medical and Surgical Journal*, it should be within the province of every general practitioner to treat successfully the more common rectal diseases, including hemorrhoids. Hemorrhoids may be classified, according to Hill, into external and internal, and of the former the most common forms are the thrombotic and the external connective tissue hemorrhoid. The thrombotic form is an extravasation of blood at the margin beneath the skin covering the external sphincter. It is a very painful condition, which usually lasts for two or three days, or until the clot has been absorbed and the pressure relieved on the nerves supplying the parts. They are usually caused by straining at stool, lifting, or by paroxysms of coughing. The treatment of this condition is simple and effective by first injecting with a sharp-pointed needle a 1 per cent. solution of eucain as follows: With the left index finger and thumb grasp the peri-anal skin near the tumor and pinch for a moment to render the part numb, and then insert the needle very superficially just under the skin, slowly injecting the whole of the top of the tumor. Then with a curved bistoury transfix the base of the swelling and cut outward, and if necessary use a curette to remove the clot and pack firmly with a strip of iodoform gauze and allow it to remain for twenty-four hours to prevent the formation of another clot. This procedure, Hill says, is always successful.

The "connective tissue hemorrhoid" is made up of redundant folds of peri-anal and anal skin caused by stretching this region by large hard fecal masses. A slight laceration is produced and a mild infection takes place. In the treatment of this form, when the external sphincter is acutely inflamed, but not hypertrophied, a palliative course of treatment is recommended. Constipation must be relieved. After bathing the parts with warm water and drying, he advises those procedures recommended by Goodsall and Miles of London of removing all adherent secretions and previous ointments, wiping the anal region with olive oil on cotton wool and then apply the following ointment:

℞.	Zinci oxidi	ʒii	8
	Linimenti camphoræ	℥ss	15
	Lanolini	℥i	30

M. Ft. unguentum. Sig.: To be applied locally at night, and during the day dust the parts with the following powder:

℞.	Zinci oxidi	℥ss	15
	Pulv. camphoræ	ʒii	8
	Pulv. amyli	ʒx	40

M. Ft. pulvis. Sig.: To be applied locally during the day.

After the acute symptoms have subsided remove by excision, first anesthetizing with the eucain solution and excising the hemorrhoid with curved scissors and allow it to heal by granulations, or if the base is too broad the wound may be united with catgut sutures. Only two or three folds should be removed at one time, in order to avoid contraction of the anus. As to internal hemorrhoids where the patients complain of bleeding and protrusion takes place, operation is recommended in all cases. The author favors the injection method in skilled hands in such cases. He proceeds as follows: Empty the bowel by means of a saline cathartic and a large enema of soap and water; render the parts aseptic by means of a bichlorid solution and slowly inject the following:

℞.	Acidi carbol.	ʒii	8
	Acidi salicylici	ʒss	2
	Sodii biboratis	ʒi	4
	Glycerini (sterile) q. s. ad	℥i	30

M. Sig.: Inject six to twelve drops slowly.

After the injection the hemorrhoids should be replaced within the bowel and a suppository *containing one grain* (.06) of pulverized opium inserted and a T bandage applied with moderate pressure over the anus. The bowels should be moved with cascara on the second night and daily thereafter.

While the writer does not believe in the exclusive use of this method, he is of the opinion that in properly selected cases where the external sphincter is somewhat relaxed, or can be dilated without much discomfort to the patient, perfect results may be obtained. But where the hemorrhoids are not large or are over three in number they may preferably be treated radically by ligature method.

Gant, in *New York Medical Journal*, states that the non-operative treatment of hemorrhoids consists in placing the patient in bed in a recumbent position, restricting the diet to liquids and semi-solids, giving laxatives and applying the ice bag and astringent remedies to reduce the swelling and inflammation. If strangulation is present with pain and spasm of the sphincter hot water compresses should be applied and suppositories containing morphin, gr. ¼ (.015), each inserted as necessary. If hemorrhage is present a small plug of gauze about the size of the little finger and three inches long should be inserted, moistened in a 2 per cent. silver nitrate solution or a 10 per cent. ichthyol or 50 per cent. balsam of Peru. But he is of the opinion that non-operative treatment is only palliative and must be followed sooner or later by operation. The operations most frequently employed are: 1, the clamp and cautery; 2, ligature; 3, excision; 4, injection.

This author prefers the clamp and cautery or the ligature methods. In uncomplicated cases he prefers the office treatment, and he has discarded cocain and eucain, and operates under local anesthesia by distending the tissues with sterile water.

Pruritus Vulvae.

The *Buffalo Medical Journal* recommends the following in the treatment of pruritus vulvæ:

℞.	Acidi borici	ʒii	8	
	Acidi carbol. liq.	ʒi	4	
	Morphinæ muriatis	gr. i		06
	Lanolini	℥ii	60	

M. Ft. unguentum. Sig.: Apply locally.

In pruritus ani the following is of service:

℞.	Resorcin	gr. vii		45
	Pulv. opii	gr. iii		20
	Ung. aq. rosæ			
	Lanolini, āā	ʒii	8	

M. Sig.: Apply a small amount on absorbent cotton morning and night.

Medicolegal

Negligence of Experts.—The Supreme Court of the United States says, Oceanic Steam Navigation Co. vs. Aitken, that it is true that negligence must be determined on the facts as they appeared at the time, and not by a judgment from actual *consequences* which then were not to be apprehended by a prudent and competent man. This principle nowhere has been more fully recognized than by this court. But it is a mistake to say that if the man on the spot, even an expert, does what his judgment approves, he can not be found negligent. The standard of conduct, whether left to the jury or laid down by the court, is an external standard, and takes no account of the personal equation of the man concerned. The notion that it "should be co-extensive with the judgment of each individual," was exploded, if it needed exploding, by Chief Justice Tindal, in Vaughan vs. Menlove, 3 Bing. N. C. 468, 475. And since then, at least, there should have been no doubt about the law.

May Show Refusal to Submit to Examination.—The Court of Civil Appeals of Texas says, in Houston Electric Co. vs. Lawson, a personal injury case brought by the latter party as next friend for his minor son, that on the trial the company offered to prove that it had made a motion to have the court appoint a committee of physicians to examine the child to ascertain the extent of its injuries, and that the plaintiff would not agree to the granting of said motion. The plaintiff objected to this proof being made, and the objection was sustained. The court thinks it clear that it was error to exclude this evidence. It says that the extent of the child's injuries and their reasonable probable effect on its future health were put in issue by the evidence. On these issues no testimony would be as satisfactory as the opinion of competent and disinterested physicians who had made a thorough examination of the child. This source of information was closed by the refusal of the plaintiff to submit to an examination and the want of power in the court to compel such examination. When a plaintiff in a case of this character refuses to submit to an examination. the fact of such refusal is a circumstance tending to discredit his claim as to the extent of his injuries, and is admissible in evidence for that purpose. Of course, there might in many cases of personal injury be reasons for a refusal by the plaintiff to submit to an examination which would greatly weaken, if not wholly destroy, the effect of such refusal as evidence; but the refusal, and the reason, if any, given therefor by the plaintiff, are facts to go to the jury, and must be weighed by them.

Absent Treatment and the United States Postal Law.—The United States Circuit Court of Appeals, Fifth Circuit, reverses and remands for a new trial the case of Post vs. United States, as it is now entitled, the district court decision of which was reported on page 1659 of THE JOURNAL, June 18, 1904. There were four indictments under the United States statute which provides, in substance, that if any person, having devised or intended to devise any scheme or artifice to defraud, to be effected by either opening or intending to open correspondence through the United States mail, shall, in and for executing such scheme or artifice, or attempting to do so, place or cause to be placed any letter, etc., in any postoffice of the United States, such person shall, on conviction, be punished, etc. The gist of the scheme or artifice charged in each of the first three indictments was that the accused in this case advertised to practice mental healing, and received pay to treat patients "when she did not intend to administer any treatment." The court says that the evidence not tending to sustain the charge that she did not intend to administer the advertised treatment for which she was paid, a verdict of not guilty should have been directed on these indictments. If the accused intended to administer and did administer the treatment she advertised, she was not guilty of the fraud charged, although the treatment might be in fact valueless. The mere allegation that she was engaged in the business of mental healing was not an allegation of a "scheme or artifice to defraud."

In the fourth instruction there was a distinct charge that the representations made by the accused as to her ability to cure, etc., were false, and were well known to her to be false; that her promised treatment was ineffectual for the cure of any disease. It did not present a question of the lawfulness of the calling of a mental healer, or whether or not mental science is a fraud and humbug, but it presented the question of the good faith of the accused. The case, the court says, should be tried with the distinct understanding that the practice of mental healing is, in federal law, as lawful as healing with drugs. The question involved her belief in her representations and promises. While her belief was not the subject of direct proof, it might be ascertained from circumstances and by the proof of her actions and declarations. If her method of treatment was as baseless as mundane astrology, it made no difference, if the accused believed in it and practiced it in good faith and without positive intention to defraud. If, without belief in her professions or proposed treatment, and with knowledge that her representations were false, she made them to defraud, the fact that mental healing is a lawful vocation did not protect her.

In a criminal trial, where the defendant's only plea is "Not guilty," the general rule is unquestioned that the burden of proof, and the obligation to convince the jury of the prisoner's guilt beyond a reasonable doubt, as to all essential matters, including the criminal intent, is on the prosecution throughout the trial. This being the law, it was error, the court thinks, to instruct the jury, in any aspect of the case, that the burden of proof rested on the accused to satisfy the jury that she possessed the power to cure diseases, as claimed, and that her contention must be satisfactorily proved. It was one of the affirmative averments of the indictment that the representations made by the accused were false and not capable of performance by her, and the burden was on the United States to prove it.

Another point that the court makes is that, under the practice of the federal courts, the judge may express his opinion as to the weight or effect of evidence or the credibility of witnesses; but, if evidence is admitted as, and is, legal and relevant, the jury should not be peremptorily directed to ignore it. The court says that it is not holding that the accused had a right to embark in a business, and to insist that its illegality should be tested by principles beyond the understanding of others, and not by such knowledge as the courts and juries possess. The case must, of course, be tried and tested by the rules of law and by common human understanding. But when a question of fact is tested, although it may involve the existence of a power not generally recognized, evidence bearing on the question must be considered as in other cases. Science has not yet drawn, and probably never will draw, a continuous and permanent line between the possible and impossible, the knowable and unknowable. Such line may appear to be drawn in one decade, but it is removed in the next, and encroaches on what was the domain of the impossible and unknowable. Advance in the use of electricity, and experiments in telepathy, hypnotism and clairvoyance, warn us against dogmatism. The experience of the judiciary, as shown by history, should teach tolerance and humility, when we recall that the bench once accounted for familiar physical and mental conditions by witchcraft, and that, too, at the expense of the lives of innocent men aand women. In that day, it was said from the bench that to deny the existence of witchcraft was to deny the Christian religion. Juries would have done better. Then and now questions of fact were best tried by jury.

Finally, the court says, that in dealing with the issues raised by the record, it did not intend to express any opinion as to the substantiality of mental science, or whether it is founded on some occult natural law or on mere parade and mummery. The court is not a society for psychical research, charged with the duty of forming and announcing opinions on that subject. It endeavored only to make it plain that there was nothing in this case to require a departure from the ordinary rules of evidence and familiar criminal procedure.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical News, New York.

May 6.

1 *Railway Spine. E. R. Angell, Rochester, N. Y.
2 *Treatment of Non-malignant Diseases by the Roentgen Ray. R. H. Boggs, Pittsburg, Pa.
3 To What Extent are Cycloplegics Necessary in Determining the Refraction of the Eye and in the Prescribing of Lenses. F. Van Fleet, New York.
4 *Nasal Conditions Dependent on the Generative Organs. J. Sinexon, Philadelphia.
5 *Septic Thrombosis of the Femoral Vein, Following Influenza. D. F. Talley, Birmingham, Ala.
6 Sporadic Cretinism. Observations Based on Sixteen Personal Cases. E. M. Sill, New York.

1. **Railway Spine.**—This subject is discussed by Angell, who says that railway spine is a convenient and picturesque term which has hypnotized juries, as even the shock has hypnotized the plaintiff. It is dramatic, but not accurate. The damage done is not to the spine or spinal cord, but to the mind. It is a psychical disorder, not a physical one, and it is caused by a very real injury, a shock to the mental synthesis, producing

as definite symptoms for the time being as though a leg or an arm had been cut off. The proper treatment is isolation—absolute removal to the well regulated discipline and care of a hospital, where all influences make toward recovery.

2. Roentgen Ray in Non-Malignant Disease.—The time has come, says Boggs, when a line should be drawn between those cases that should and those that should not be treated by the Roentgen ray. It should be the physician's object to treat every patient with the therapeutic agent that is the most effective and produces a cure in the shortest time. Boggs urges: 1. That it is necessary to distinguish between the non-malignant diseases which should, and those which should not be treated by the *x*-ray. 2. That while the continual cry of technic may become tiresome to some who think the subject can be mastered in a few days or a couple of months, the method of application of the rays and the judgment of the operator accounts largely for successful or unsuccessful work. 3. That it is just as essential to administer a therapeutic dose when applying the Roentgen rays as it is when prescribing powerful drugs. 4. That idiosyncrasy is not a frequent cause of excessive dermatitis. 5. That a dosage which causes a stimulation of healthy tissues will usually produce a slight reaction in diseased tissues. 6. That at all times it should be remembered that it is not so much the *x*-ray that cures as the judgment with which it is employed. 7. That the *x*-ray is one of the best therapeutic agents known for the treatment of acne and many other skin diseases, but it is unnecessary in many instances to treat the trivial and less obstinate cases by this method. 8. That the *x*-ray, supplemented by Finsen light, is the most efficient therapeutic agent for the treatment of lupus. 9. That the *x*-ray is the most efficient agent for the treatment of certain tuberculous glands, Hodgkin's disease and selected cases of goiter.

4. Nasal Conditions and the Generative Organs.—Sinexon directs attention to the following points: 1. Turgescence of the nasal mucous membrane always occurs during coitus. 2. There also exists a marked degree of hyperesthesia of the nasal mucous membrane. 3. A more or less marked periodical engorgement of the nasal mucosa occurs in females coincident with menstruation. 4. This same engorgement also occurs periodically during pregnancy, demonstrating that it is not dependent on the menstrual flow. 5. Operations which destroy the functions of the generative organs cause the nares to return to the state which existed prior to the advent of puberty. 6. In lower animals sexual excitement is always accompanied by occlusion of the nares. 7. This engorgement in the human family may result in epistaxis or hydrorrhea. 8. The continued overstimulation of the nasal mucous membrane from sexual perversion results in a relaxation of the same through vasomotor paresis. 9. The long-continued hypernutrition from frequent or inordinate congestion will in time produce permanent tissue changes either of hyperplasia or atrophia. 10. These conditions are in no way dependent on hysteria or neurasthenia.

5. Septic Thrombosis Following Influenza.—In the case reported by Talley, the venous thrombosis began on the fourteenth day of the disease, when a marantic state of the patient was impossible. It began with recurrence of fever, which lasted four days, ended with crisis, and resembled throughout an influenza fever. The thrombosis of the femoral vein, therefore, could not be interpreted as a marantic thrombosis, but as a new development (sequela), which appeared under new febrile symptoms. The symptoms were clear, characteristic, but not severe; the disappearance of the thrombosis favorable and relatively quick.

American Medicine, Philadelphia.

May 6.

7 Methods of Inducing Labor. B. C. Hirst, Philadelphia.
8 Adulteration of Drugs. H. W. Wiley, Washington, D. C.
9 *Combined Operation of Arthrodesis and Transplantation of the Tendon of the Extensor Proprius Hallucis for the Relief of Flat Foot. H. A. Wilson and R. V. Patterson, Philadelphia.
10 *Diet in Typhoid Fever. J. B. Nichols, Washington, D. C.
11 Remarks on the Causation and Diagnosis of Hepatic Cirrhosis. J. K. Crook, New York City.
12 *Benign Strictures of the Esophagus; Report of Cases. C. D. Spivak, Denver, Colo.
13 Gynecologist and the General Surgeon; Their Respective Fields. B. H. Wells, New York.

9. New Operation for Flat-foot.—Wilson and Patterson present a favorable report of a new operation for flat-foot which they have employed, consisting of an arthrodesis of the astragaloscaphoid joint and the transplantation of the tendon of the extensor proprius hallucis through a hole drilled in the scaphoid bone, an adaptation of Wolf's operation for paralytic valgus. The loss of function of the transplanted extensor of the great toe is but temporary, and until the extensor brevis digitorum becomes educated to overcome the toe-drop. The after-treatment consists of well-adapted physical culture drills. This procedure has yielded better functional results than is possible by the use of arthrodesis alone. The combined operation offers no serious difficulties, the additional damage to the structures of the foot necessitated by this procedure is inconsiderable, the time required for treatment not longer, and the results obtained more certain and satisfactory.

10. Diet in Typhoid.—Nichols advocates a more liberal and more varied diet in typhoid than is now customary. He is opposed to the exclusive liquid diet so-called, arguing that liquid foods are not necessarily more digestible or less irritating to the bowel than are solid foods. He believes the consistency and condition of the food in the intestine is a criterion of more importance than the fluidity or solidity of the food before ingestion. Nichols gives the published results obtained from mixed and liberal feeding in typhoid, covering a total of 1,000 cases, with 77 deaths. This low mortality of 7.7 per cent. does not bear out the common apprehensions as to the dangers of departure from milk diet. Complications were not increased by the free diet. The patients were markedly more comfortable and contented, their strength appeared better maintained, convalescence was materially shortened, and from the improved resistant power the mortality rates appeared appreciably lowered, comparative statistics showing an improvement in the death rate of from 2 to 4 per cent.

12. Benign Strictures of Esophagus.—Spivak divides benign stricture of the esophagus into (1) congenital and (2) acquired. Acquired stricture may be divided into: 1. Organic; (a) after ingestion of corrosive substances; (b) after the healing of an esophageal ulcer; and (c) lues. 2. Mechanical; (a) presence of foreign bodies; (b) polypi; and (c) thrush. Due to compression from without, as tumors, enlarged lymphatic glands, aneurism of the aorta, periesophageal abscess; and verticulum of esophagus filled with food. 3. Spasmodic. The majority of all cases of benign stricture are due to cicatricial obliteration, the result of losses of substance, following scalds, produced by caustic substances. Spivak says the symptoms especially referable to deglutition are: (1) a short period at the beginning when swallowing is impossible—the period of esophagitis—followed by (2) a period lasting several months, when deglutition is not impeded, and (3) a period when the difficulty of swallowing gradually redevelops—the period of stenosis. During the inflammatory period he advises rest; alkalies in acid poisoning, and vice versa, ice to the sternum, and stimulants. Gradual dilation should be employed early. Conic, semisolid elastic esophageal bougies should be used. Metallic or whalebone sounds with olive tips should be avoided. The bougie should be left in the esophagus for several minutes. At first the sound should be passed every day, and later every other or third day. When dilation is complete, a bougie should still be passed at intervals of one month to prevent relapse. He reports three cases.

Medical Record, New York.

May 6.

14 *System and Expedition in Office Practice, Office Plans and Details. R. L. Dickinson, New York.
15 *Present Limitations of Serum Therapy in the Treatment of Infectious Diseases. H. W. Berg, New York.
16 Present Status of Roentgen Ray Therapy. R. H. Boggs, Pittsburg, Pa.
17 Rectal Abscess Containing Gonococci Without Any Accompanying Gonorrhea. F. R. Sturgis, New York.
18 *Cause of Cerebrospinal Meningitis. S. J. Maher, New Haven, Conn.
19 *Scissors for Cutting Secondary Membranous Cataracts. E. L. Oatman, Brooklyn.
20 Primary Epithelioma of the Epiglottis. D. B. Delavan, New York.
21 *Emergency Poisoning Case. J. W. Wainwright, New York.

14. System and Expedition in Office Practice.—R. L. Dickinson discusses numerous methods by means of which it is possible for the physician to economize time in office work and so increase his capacity for work.

15. **Limitations of Serumtherapy in Infectious Diseases.**—Berg reviews the principles underlying the production of antitoxic and antibacterial sera and their therapeutic application. The bacteria concerned in the production of the specific infectious diseases fall into three classes. First, those which, like the bacilli of diphtheria and of tetanus, produce a virulent, a real toxin which is set free in the culture media. Second, those bacteria which secrete but little or no free toxin, but do contain a powerful endotoxin, which is partly liberated only on the death and disorganization of the bacterial cells; good examples of this class are the pneumococcus, typhoid bacillus, the streptococci, etc. Third, those bacteria that produce no free toxins nor have the bacterial cells endotoxins of any power, but in which the cell plasma contains other poisons in addition to the protein poisons common to all bacterial cells. The most important member of this group is the tubercle bacillus. Against the first group the antitoxic sera are available, but their success depends largely on the interval of time that has elapsed since the infection began, for the antitoxin can bind only such toxin as has not yet had time to enter into combination with the body cells. In tetanus the poison becomes fixed in the central nervous system so rapidly that the serum has little chance for effect. The difficulty with the antibacterial sera is that the body's supply of alexin is very small, so that theoretically the injection of the serum should be accompanied by an additional dose of fresh normal animal serum to supply this deficiency; an impracticable procedure. The attempts to treat one disease by means of the antiserum of another, as has been attempted by injecting diphtheria antitoxin in pneumonia and cerebrospinal meningitis is repugnant to the principles of scientific serumtherapy and tends to discredit its principles. The use of Moser's antistreptococcus serum in scarlet fever in the Vienna hospitals has not given results equal to those obtained by the author in the Riverside Hospital, following the classical lines of treatment. The introduction into the body of a child of the large amounts of serum required by Moser's plan is also objectionable, owing to a possible hemolytic action.

18. **Cause of Cerebrospinal Meningitis.**—Maher describes cultural and animal experiments undertaken with pus from the spinal canal of an adult sick with cerebrospinal meningitis. The results lead him to conclude that the diplococcus of Weichselbaum is only one phase in the life cycle of an organism, which at times is larger and rod shaped, at others small and of the shape of the pneumonia diplococcus, and probably at others of yeast shape.

19. **Scissors for Cutting Secondary Membranous Cataracts.**—Special scissors have been designed by Oatman to be used for cutting the membranous bands which sometimes form after cataract extraction. One point is blunt and the other, which is sharp, is ground to a knife edge on its back, so that after introduction into the anterior chamber it may easily perforate and pass below the membrane.

21. **Emergency Poisoning Case.**—The case gotten up by Wainwright is compact and handy, neatly finished in black leather, with a substantial handle. Its outside dimensions are 12 inches long, 4¼ inches wide, and 6 inches high. The contents are as follows: One stomach tube, one tongue forceps, one mouth gag, one 2-oz. glass syringe, one hypodermic syringe. It also contains large bottles of magnesium sulphate, of zinc sulphate in 20-grain powders, powdered mustard, calcined magnesia, and chloroform. The 1-oz. vials contain amyl nitrite, alcohol, dialyzed iron, acetic acid, oil of turpentine, and aromatic spirits of ammonia. The ½-oz. vials contain powdered ipecac, powdered opium, potassium bromid, chloral hydrate, potassium permanganate. The hypodermic tablets are of strychnin sulphate, morphin sulphate, muriate, apomorphin hydrochlorate, nitroglycerin, digitalis, and atropin sulphate. It is believed that this emergency poisoning case contains practically all the essential means for carrying on a successful fight against the effects of poison in the human system. The case also contains a manual on acute poisoning, giving special symptoms, simple tests, chemical antidotes, physiological antagonists and treatment.

Boston Medical and Surgical Journal.

May 4.

22 *Certain Aspects of the Differential Diagnosis Between Epilepsy and Hysteria. J. J. Putnam and G. A .Waterman, .Boston.
23 *Subacute Perforation of the Stomach, with Report of Three Cases. F. B. Lund, Boston.
24 *Senile Epilepsy. G. K. Collier, Sonyea, N. Y.

22. **Epilepsy and Hysteria.**—Putnam and Waterman report eleven cases to show how difficult the differential diagnosis between hysteria and epilepsy may occasionally be, and how much injustice the physician is liable to do his patients unless he keeps himself ready to revise his judgments. The authors suggest that the neurological staff of every dispensary and hospital should embrace one or more members skilled in psychopathic researches, by whom all doubtful cases should be reviewed from time to time. Although it is correct, in general, to say that the diagnosis of so-called idiopathic epilepsy is considerably more grave than that of hysteria, and that these two affections represent different tendencies, yet this statement should not be taken as absolute without qualification. It is probable that the term epileptic, as implying a tendency to outbreaks of certain sorts, covers a variety of pathologic tendencies, and the mere form of the attack does not always enable us to distinguish between them. Thus, epileptic fits as seen in cases of brain tumor may be indistinguishable in themselves from those met with in cases exhibiting the familiar degenerative tendency associated with the name of epilepsy in general. Again, degeneracy itself is by no means always present in epileptic conditions, even those classified as idiopathic. We know too little of the physiology of the epileptic seizure, in its varied forms, to be able even to say there is a sharp distinction to be drawn between such an attack as occurring in hysteria and another which might be found in epilepsy proper. However much we may believe these two forms to be different, it is impossible at present to give the ground for our belief.

23. **Subacute Perforation of the Stomach.**—From a study of his own and recorded cases, Lund draws the following conclusions: 1. The symptoms of subacute perforation of the stomach are similar to those of acute perforation, with the important exception that they are less violent and are not followed by collapse or by the development of general peritonitis. 2. The location of the pain and tenderness depends on the location of the ulcer and varies with it. 3. The treatment should be, if possible, posterior gastroenterostomy without breaking up the protective adhesions. A case of ulcer of the stomach, gallstones or ulcer of the colon that has gone on sufficiently to threaten perforation, is certainly in a condition to be benefited by no other treatment than the operative. The treatment of an open perforation is manifestly to invert the edges of the ulcer and close it by suture. The ulcer has already perforated into the general cavity and the peritoneum is soiled. In these subacute perforations, however, nature has already closed the perforation, and if we can get along without tearing the adhesions, opening up the ulcer and soiling the healthy peritoneum, we give our patient a distinctly better chance. In case the ulcer is on the anterior surface or lesser curvature and is to the right of the median line, and the adhesions are to the inferior surface of the liver, there is nothing to prevent turning up the posterior surface of the stomach and performing a posterior gastroenterostomy without breaking up the adhesions, opening the ulcer, or soiling the cavity with stomach contents. We provide internal instead of external drainage for the ulcer, and we operate in a region where the peritoneum and gastric wall are healthy instead of inflamed, and where our opportunity of getting perfect healing is the best. And last, but not least, we give the best treatment to the underlying condition of chronic ulcer to which the perforation has been due.

24. **Senile Epilepsy.**—Collier gives the histories of five cases of epilepsy in which the onset occurred between the forty-sixth and sixty-fifth years.

New York Medical Journal, New York.

May 6.

25 Politico-Sociological Aspects of Tuberculosis Problems. J. Wright. New York.
26 *Dietetic Exercises in Infant Feeding. E. K. Shelmerdine, Philadelphia.

27 Inflammation of the Glands of Bartholin. C. C. Miller, Chicago.
28 Immediate Abdominal Section. D. Lewis, Chicago.
29 Adenoids in the Adult. D. M. Barstow, New York.
30 *Operation for the Cure of Chronic Bursitis, Especially Adapted to Housemaid's Knee. P. Hoffmann, St. Louis.
31 *Remarks on the Problems Connected with the Study of Pulmonary Tuberculosis; and Suggestions of a New Plan for Improving Statistics Relating to the Disease. E. L. Shurly, Detroit.

26. **Infant Feeding.**—Shelmerdine classifies infants requiring artificial feeding into three groups: 1. Easy cases. 2. Difficult cases. 3. Very difficult cases. Two tables are given showing the method of milk modification adopted by the author, and the diet suitable for the cases, as classified, is described at length.

30. **Operation for Chronic Bursitis.**—The operation devised by Hoffmann for the cure of this condition consists of puncturing the bursa, thoroughly scarifying its walls, expressing its fluid contents, bringing its walls in contact, and holding them so by means of a compress until their raw surfaces have grown together and have thus obliterated the cavity. No anesthetic need be given as the operation is practically free from pain, except that produced by puncturing the skin. The patient need not be confined to bed or even use crutches during the after-treatment, and may attend to almost any tasks, except such as require kneeling.

31. **Tuberculosis Problems.**—That some feasible plan for securing reliable statistics relating to pulmonary tuberculosis is an absolute necessity for the solution of the scientific problems at hand, no practitioner will deny. But how to get such information in conformity with the rights of the patient, the public at large, and the practitioner, under our form of civil government is a serious question. To this end, Shurly suggests the following outline of a plan for consideration: First, let the registered medical profession of the state nominate (by epistolary vote, sent to the secretary of state) nine of their number, from whom the governor shall appoint three to become a board of review (or a body otherwise named). Second, this board shall be created by statute (of the legislature) with power to demand and receive reports from all practitioners, containing such practicable data as the board may dictate. Third, this board's proceedings, books, papers, and files, in so far as the persons reported to them are concerned, shall be wholly in its custody, considered as confidential, and absolutely inaccessible to the public, the press, or the courts. Fourth, each month this board shall make an abstract of the communications received in schedule or detail form, and transmit such abstract without names to the state board of health, which shall publish the same quarterly for the edification and instruction of the medical profession. It would seem as though such a plan would meet the insuperable objection of making public any patient's name, family, or clinical history and give us data devoid of supplication, error of diagnosis, or other common error. Beside, no thoughtful, reasonable physician would object to making reports to such a constituted board.

St. Louis Medical Review, St. Louis, Mo.

April 29.

32 New Therapeutic Measures in Neurology. S. I. Schwab, St. Louis.
33 Contribution to the Etiology of Nervous Affections. T. H. Evans, Philadelphia.

American Journal of Medical Sciences.

May.

34 *Action of Electrically Charged Copper on Certain Organisms in Water. M. E. Pennington, Philadelphia.
35 *Studies on Bactericidal Action of Copper on Organisms in Water. N. Gildersleeve.
36 *Study of the Action of Colloidal Solutions of Copper on Bacillus Typhosus. A. H. Stewart, Philadelphia.
37 Glioma of the Nose. J. P. Clark.
38 Case of Cerebrospinal Rhinorrhea, with Retinal Changes. S. I. Schwab and J. Green, Jr., St. Louis.
39 Case of Mind Blindness. W. A. Holden.
40 *Purpura Hemorrhagica. T. W. Hastings, New York City.
41 Two Cases of Chronic Splenic Anemia, One with Achylia Gastrica. I. H. Levy, Syracuse, N. Y.
42 *Clinical and Pathological Report of a Case of Splenic Anemia. H. L. Sanford and D. H. Dolley, Cleveland, Ohio.
43 Sarcoma of the Small Intestine. E. Libman, New York.
43½ *Clinical Aspects and Differential Diagnosis of Appendicitis and Typhoid. C. G. Cumston, Boston.
44 *The Law and the Doctor. C. S. Patterson, Philadelphia.
44½ *Observations on Aneurism and Arteriosclerosis. C. N. B. Camac, New York City.
45 Case of Laminectomy for Gunshot Wound on the Spine. J. P. Marsh, Troy, N. Y.
46 Gonorrheal Urethritis with Unusual Complications. D. Crosby.

34. **Action of Copper on Bacteria.**—Experiments conducted by Pennington for the purpose of determining the action of electrically charged copper plates on certain pathogenic germs suspended in water have shown that copper electrodes carrying a small current are actively germicidal for the typhoid and colon bacilli. The experiments seem to indicate a balance in favor of a large copper surface with which the organisms come in contact, rather than the actual copper content of the water.

35. **Id.**—Gildersleeve has also been investigating this subject, and found that dilute solutions of copper salts have a marked destructive action on many bacteria. Of these salts the sulphate is the most active, probably because it undergoes electrolytic dissociation more readily than the others.. The amount of sulphate to be used in the water should be from one part in 250,000 to one part in 100,000, depending on the character of the water. Colloidal copper will quickly destroy certain bacteria; should copper vessels or plates be used to destroy bacteria in water, they must be kept highly polished or the bactericidal property will be greatly reduced. There is no evidence at hand showing that copper, ingested in small quantities for long periods, has a detrimental action on the health of the individual.

36. **Action of Colloidal Solutions of Copper on Typhoid Bacilli.**—This study was carried on by Stewart of the bacteriological laboratory of the Bureau of Health of Philadelphia. Trials were made as to the period of total disappearance of typhoid organisms which had been placed in sterile Schuylkill water and in that taken directly from the tap, and from the river surface containing large numbers of water organisms. These waters were placed in vessels of glass, porcelain, tin and copper and their contents kept at room temperature were plated every fifteen minutes for periods ranging from three to six hours. All the experiments were repeated many times. Sterile drinking water in clean copper vessels inoculated with typhoid bacilli invariably showed that the bacilli had all perished in one hour. Water similarly treated in tin vessels invariably showed living organisms at the end of twenty-four hours. Water similarly treated in glass vessels exposed to light showed varying results, but in no instance had the typhoid organisms all perished in three hours. Water similarly treated in enamel vessels showed a slight diminution of the number of typhoid organisms in three hours. Water similarly treated in aluminium vessels showed a disappearance of the typhoid organisms in three hours. Raw tap-water in glass vessels showed an increase in the number of organisms in three hours; occasionally, there was a slight diminution in their number. Raw tap-water in copper vessels in one experiment showed a diminution from 384,000 germs per cubic centimeter to 18,000 per cubic centimeter in three hours. Usually the diminution was not so great. Raw tap-water containing large numbers of river organisms and considerable vegetable matter, when inoculated with millions of typhoid organisms and placed in a copper vessel, showed that the typhoid bacilli were killed off in one and three-fourths hours to two and one-half hours. Water containing colloidal copper has a more rapid tonic action on typhoid organisms than on river water organisms. The quantity of colloidal copper given off from a one-liter copper vessel in three hours was one part to four million. This amount killed off the added typhoid organisms in from one and three-fourths to two and one-half hours, and chemical experience has shown that this amount of colloidal copper is harmless when taken into the human system. In epidemics of typhoid fever, Stewart concludes that water could be purified of typhoid organisms by allowing it to stand in a copper vessel for three hours.

40. **Purpura Hemorrhagica.**—Hasting's case is of interest because of the close resemblance of the clinical course to cases of acute leukemia, and in this connection he calls attention to the fact that not infrequently cases of purpura are reported in the literature as cases of leukemia. The acute condition, swelling of the right tonsil, the high percentage of lymphocytes in the peripheral circulation suggested the possibility of acute leukemia with an intercurrent infection from the right tonsil gives rise to a well marked leucopenia. However, the evident absence of tonsillitis before admission, the sore throat

occurring a few days later; the absence of pallor at any period preceding the first attack of epistaxis; absence of glandular and splenic enlargement; the persistent bleeding from the bowel, gums and nose; the purpuric eruption from the onset of the condition suggested Werlhof's disease rather than acute leukemia.

42. **Splenic Anemia.**—The case reported by Sanford and Dolley was of long duration, with gastro-intestinal disturbances, and pain in the splenic region; recent severe and repeated hemorrhages by stool and vomitus following traumata; blood findings characteristic of secondary anemia of the chlorotic type, without leucocytosis, and with no general lymphatic enlargement; idiopathic splenomegaly. An exploratory laparotomy was performed, later a splenectomy, to which the patient succumbed. The pathologic findings at the autopsy were as follows: Dislocation of the spleen, with marked elongation and torsion of its vessels and thrombosis; chronic passive congestion and fibrosis of the spleen; interlobular atrophic cirrhosis of the liver; chronic passive congestion of rest of portal system; compensatory hyperplasia of hemolymph nodes; hyperplasia of the bone-marrow, secondary anemia; moderate diffuse emphysema of the lungs; tuberculosis of bronchial and tracheal glands. The authors believe that the patient's previous history of pallor, digestive disturbances, and pain in the splenic region, symptoms of which there is a history extending over a number of years, strongly suggest the early stage of a splenic anemia. The frequent urination and the pain in the splenic region also would imply a long-standing dislocation of the spleen. This is corroborated by the enormous elongation of the splenic vessels. Whether or not all the twists in the splenic veins occurred at the time of the two accidents the patient had, it is impossible to state, but it is at least more reasonable to suppose that from their multiple character they did not all occur at one time, but that some had existed previously. The thrombosis of the splenic vessels must have been the cause of the sudden enlargement of the spleen while the patient was in the hospital. The lack of organization in the thrombi of the vessels removed at the splenectomy proves this. If Banti's stage of splenic anemia is limited only to those cases in which the cirrhosis is a terminal manifestation, this case can not be included in that category, for the cirrhosis of the liver is certainly of as long standing as the fibrosis in the spleen. Sanford and Dolley prefer to regard the case as one of splenic anemia associated with a cirrhosis of the liver, not as a result of the process in the spleen, but rather accompanying it. The enormous elongation and torsion of the vessels associated with the dislocation of the spleen possess a very probable etiological significance in this case.

43½. **Appendicitis and Typhoid.**—Cumston discusses the differential diagnosis of these affections under four heads, as follows: 1. Analysis of the clinical symptoms. 2. Examination of the urine. 3. Examination of the blood. 4. Widal's sero-diagnosis, but offers nothing new. He says that every time an appendicitis exists, either alone or associated with typhoid, an operation is indicated. Interference is contraindicated only in cases of simple typhoid, or one associated with symptoms arising from the appendix, but which are so slight that they can not be considered as due to a true case of appendicitis.

44. **Law and the Doctor.**—Under this title, Patterson discusses the various relations with the law into which the doctor is brought by reason of his profession and his practice. He formulates three practical conclusions: In the first place, it is the duty of every good citizen to obey the law, and this duty is in a high degree incumbent on members of all learned professions whose education and training may properly be supposed to raise them above the common mass of people, and to give to them a higher sense of duty. If, therefore, there be in the law any regulation which seems to do injustice to the interest of your profession, or to yourself, work and agitate for the reformation of the law; but, so long as the regulation be in force, faithfully obey it. In the second place, remember that it is as foolish for a medical man to undertake to determine for himself what the law is on any subject, as it is a lawyer to attempt to prescribe for the bodily ills of himself or of any other person. Therefore, whenever you are in any way brought face to face with law, consult a lawyer, and do it promptly, for it is as true in law as in medicine, that "an ounce of prevention is," if it be not too late to prevent, "better than a pound of cure." In the third place, as legal restrictions and professional ethics touch at many points, it is wise for every young doctor to form such relations of mutual confidence and regard with one or more of the seniors of his profession, that he can obtain for himself the great benefits of a senior's advice, when questions of professional expediency present themselves. Remember that every profession has its traditions, in which is crystallized the wisdom of its past; and that seniors who have risen to eminence, and who have that soundness of judgment which the young, however learned and able, rarely have, can best determine when it is not judicious to depart from those traditions.

44½. **Aneurism and Arteriosclerosis.**—Camac summarizes his findings as follows: 1. Arterial disease appears to be rare, almost unknown in animals. Syphilis, being probably peculiar to man, is by this observation placed more firmly in the list of etiological factors. 2. Arterial disease in children under six years, even in those who are victims of congenital syphilis, is practically unknown. In those from six to fifteen years it is rare. It is found in the initial stage most commonly between the ages of thirty and forty years. 3. The teratologic factor, though an undeterminable one, is of great importance. 4. Arterial disease seems to be attributable to syphilis in about 32 per cent.; to tuberculosis in about 16 per cent. 5. The facts presented go to show that the colored race is affected about four times more frequently than the white. 6. General arteriosclerosis seems to be not commonly found with aneurism and its presence may be considered as evidence against the probable development of aneurism.. 7. Staining with selective stains, and treating with a chemical which digests tissue, shows the elastic tissue to be free of histological alterations, suggesting that this tissue undergoes physical or molecular rather than histologic change.

St. Paul Medical Journal, St. Paul, Minn.

May.

47 Exploratory Incision in Cases of Suspected Malignant Disease of the Abdominal Viscera. C. G. Cumston, Boston, Mass.
48 Chronic Urethritis in Women. J. L. Rothrock, St. Paul, Minn.
49 *Appendicitis, with Special Reference to This Disease in Women. A. MacLaren, St. Paul, Minn.
50 Death Returns in Minnesota for 1904. H. M. Bracken, Minneapolis.
51 In Memorium: Nathan Smith Davis as a Man. E. C. Dudley, Chicago.

49.—See abstract in THE JOURNAL, Jan. 21, 1905, page 238.

Southern Medicine and Surgery, Chattanooga, Tenn.

May.

52 Acute Septic Osteitis. J. L. Crook, Jackson, Tenn.
53 Functional Disorders of the Biliary Secretion and Their Treatment. H. Richardson, Baltimore.
54 Clinical Significance of Ascites. R. Wallace, Chattanooga, Tenn.
54½ Conservative Gynecology. C. R. Robins, Richmond, Va.

Journal of Medical Research, Boston, Mass.

May.

55 Biology of the Micro-Organism of Actinomycosis. J. H. Wright, Boston.
56 Reaction Curve of Tubercle Bacilli from Different Sources in Bouillon Containing Different Amounts of Glycerin. T. Smith, Boston.
57 Variations in Virulence in Organisms Acted on by Serum, and the Occurrence of Spontaneous Agglutination. E. Steinhardt, New York City.
58 Changes in the Bacterial Content of Water in Passing Through a Distributing Reservoir. B. G. Philbrick, Boston.
59 Intracellular Fibrils in a Malignant Tumor of Epithelial Origin. S. B. Wolbach, Boston.
60 Cyclasterion Scarlatinale. F. B. Mallory, Boston.
61 Further Observations on the Transmission of Sarcocystis Muris by Feeding. T. Smith, Boston.

Northwestern Lancet, Minneapolis.

May 1.

62 Why We are Sometimes Obliged to Re-operate in Gallstone Cases. J. E. Moore. Minneapolis.
63 Appendicitis. R. E. Farr, Minneapolis.

Indiana Medical Journal, Indianapolis.

May.

64 Diagnosis and Treatment of Nephritis. D. L. Miller, Goshen, Ind.

65 Tumors of the Brain; Their Etiology and Pathologic Effects. G. F. Neu, Indianapolis.
66 Lumbar Exploratory Puncture. J. A. McDonald, Indianapolis.

Ophthalmic Record, Chicago.

April.

67 Diffuse Leuco-Sarcoma of the Choroid. R. H. Johnston, Baltimore.
68 Practical System of Near Test Types. D. W. Wells, Boston.
69 Difficulties Attending Diagnosis of Aseptic Foreign Bodies in the Orbit. N. M. Black, Milwaukee, Wis.
70 Pathology of Pterygium. R. H. Johnston, Baltimore.

Montreal Medical Journal.

May.

71 Adaptation and Tuberculosis. J. G. Adami.
72 Pathologic Conditions of Clinical Interest Associated with Movable Kidney. J. M. Elder, Montreal.
73 Microphthalmus: Persistent Pupillary Membrane: Anterior Synechia and Central Opacity of the Cornea. J. W. Stirling, Montreal.
74 Case of Congenital Absence of the Vagina and Uterus: Artificial Vagina: Subsequent Operation for Appendicitis. A. L. Smith, Montreal.
75 Unusual Case of Thyroidectomy. F. J. Shepherd.
76 Jubilee of Laryngology. H. S. Birkett, Montreal.

California Medical and Surgical Reporter, Los Angeles, Cal.

May.

77 Nature and Treatment of Epilepsy. E. Wing, Los Angeles, Cal.
78 Diphtheritic Anti-Toxin Treatment for Cerebrospinal Meningitis. L. Roth, Los Angeles, Cal.

Albany Medical Annals.

May.

79 Cancer of the Uterine Cervix; Its Classification and Extension. J. A. Sampson, Albany, N. Y.
80 Abdominal Pain from Adhesions. C. G. Cumston, Boston, Mass.
80½ Blood Pressure. W. Kirk, Jr.

Archives of Physiological Therapy, Boston.

April.

81 Static Electricity in Chronic Nephritis: A Recapitulation. C. S. Neiswanger, Chicago.
82 *Therapeutic Application of the Continuous Current.* T. A. Pease, Norwood, N. Y.
83 Case of Hyperidrosis Axillæ Treated by X-Rays. G. H. Stover, Denver.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.

April 22.

1 *Determination* of Arterial Blood Pressure in Clinical Practice. C. J. Martin.
2 Case Simulating Intracranial Tumor. T. R. Glynn.
3 *Arthritis Deformans and Its Allies. B. Abrahams.
4 *Medical Treatment of Insanity. R. Jones, Claybury.
5 Inquiry Into the Existence of Typhoid Fever in Bermuda. L. Kilroy and F. W. Hooper.
6 *Corneal Reflex in Anesthesia. L. K. Thomas, London.

3. **Arthritis Deformans and Its Allies.**—Abraham directs attention to the clinical features of the various affections which are ordinarily grouped under the name of rheumatoid arthritis, a term which he regards as being unscientific. These conditions are: (*a*) The children's disease described by Still; (*b*) the acute process occurring in young women; (*c*) the familiar multi-articular affection of middle-aged women, and (*d*) the well known chronic malady of the aged.

4. **Medical Treatment of Insanity.**—In the acute stage of no disease, says Jones, is care and attention more necessary, nor more expensive, nor is there more hope of cure than there is in the early stages of insanity. It is essential to prevent exhaustion and to maintain the patient's strength by giving unirritating foods, easy of digestion, frequently and in small quantities. Plenty of sleep is necessary. For this purpose sedatives and not hypnotics should be given. When there is delirium and when the pulse is full, bounding and firm, and there are symptoms of sthenic *inflammation*, venesection may prove beneficial. The wine of tartarated antimony for furious excitement, with vascular and cerebral *congestion*, especially when combined with morphin, is very effective. Aconite ice bags to the head, and continuous immersion are also useful. As a form of electric stimulation, electricity administered in the form of currents through water at 100 F. given daily, or several times a week, for about 10 to 30 minutes, is particularly commendable. For controlling motor *excitement*, *succus* condii in doses of from 10 minims to one dram, is efficient. It is best to begin with small doses and to combine these with strychnin or some other cardiac stimulant. As to hypnotics, for the cure or relief of insomnia, paraldehyd, in doses of one-half dram to two drams, is the safest. It is not recommended in lung affections. Hyoscin, or hyoscyamin combined with morphin, are effective for excitement and sleeplessness. However, the bromids are the most useful. They may be combined with chloral and tincture of hyoscyamus, when these are not contraindicated. In cases of so-called hysterical insanity, Jones mentions, as a possible remedy, the use of thorium hydroxid, 500 grams to be placed in a cap over the head, worn day and night. This drug possesses *radio-active* properties. Jones says two of his cases recovered under such treatment. Laxatives and purgatives are absolutely necessary, and in free doses, usually twice the amount required by a healthy person. The *action of the skin should be assisted*. This is done best by out-door exercise. Speaking of alcohol, he says that in the *great majority of cases of insanity it is not essential*, but he does not hesitate to use it in small doses, every few hours, in *the exhaustion of acute mania*, more especially in the puerperal form of insanity. It often interferes with digestion, and it is always best administered with liquid nourishment. However, it is a dangerous remedy in the various forms of mental depression, for it gives the patient a feeling of buoyancy and stimulation without any lasting benefit and without the sustaining action of food. Strychnin and nux vomica are useful in cases of exhaustion from acute insanity and in cases of cerebral anemia. They should be given alternately for a few weeks, and with about one week's interval.

6. **Corneal Reflex in Anesthesia.**—According to Thomas the corneal reflex can not be depended on as a guide in the administration of anesthetics in cases requiring muscular relaxation, especially in abdominal and hemorrhoidal operations, in which moderate secondary dilation of the pupil is the best guide to complete success. He has found that there is a much greater interval of safety between the loss of the corneal reflex and the failure of respiration and heart than is generally admitted, and that the reaction to corneal stimulation varies enormously in different individuals.

The Lancet, London.

April 22.

7 *Dissemination of Mammary Carcinoma. W. S. Handley, London.
8 *Nature of Diabetes Mellitus. W. C. Bosanquet, London.
9 *Gallstones and Cancer. G. R. Slade, London.
10 Three Cases Illustrating the Condition of the Small Intestine Some Years After Extensive Enterectomies. A. E. J. Barker, England.
11 Further Note on the Relation Between Various Atmospheric Conditions and the Occurrence of Cerebral Hemorrhage. J. W. Russell, London.
12 Plague in Cats. W. Hunter, Aberdeen.
13 Suppurative Periostitis Following Typhoid Fever. L. S. Dudgeon, London.
14 *Cerebro-Spinal Manometer. F. C. Eve, London.

7. **Dissemination of Mammary Carcinoma.**—This is the third and concluding lecture delivered by Handley on this question. From the mass of material presented, he draws the following practical conclusions: If, when it transgresses the limits of the breast, cancer spreads primarily in the deep fascia, the main operative aim next, of course, to complete removal of the breast and of the axillary glands, should be the removal of as wide an area as possible of the deep fascia. And if the mode of fascial extension is by centrifugal continuous permeation, the area affected is roughly a circle, and the area of fascia removed should also be circular with its center at the point of origin of the primary neoplasm. The use of the expression "pectoral fascia" to describe the area which requires removal and the almost exclusive attention paid to the axillary glands as the channels of dissemination have led to inadequate excision of the deep fascia in a downward direction over the upper part of the abdomen. In order to prevent epigastric invasion, the usual incision should be prolonged downwards over the linea alba for about two inches, the flaps undermined, and the fascia excised as far down as a horizontal line running two inches below the ensiform cartilage, or even lower if the growth is in the inferior part of the breast. This step does not increase the shock of the operation. Excision of the overlying skin and of the underlying muscle must

be free, but need not be carried out over so wide an area as excision of the fascia, for the extension of the growth to skin and muscle is a secondary process. As to fascia, it appears that even the widest removal of deep fascia as at present carried out is deficient in the direction of the epigastrium. Owing to the fact that the abdominal muscles arise well above the costal margin, the excision of the deep fascia over the origins of these muscles, a step which forms a part of the accepted operation, does not necessarily involve any interference whatever with the epigastric deep fascia, still less such an extensive removal of it as he is advocating. Local and intrathoracic recurrence after the operation for cancer of the breast appears to take place more and more rarely in the practice of experienced surgeons—that is to say, the modern operation seems to afford a maximum of protection so far as the chest is concerned. On the contrary, it appears from statistical records that the operation for cancer of the breast as at present performed does not by any means give the maximum attainable security against abdominal recurrence. For while modern results show a diminution in the sum total of cases of recurrence, cases of purely abdominal recurrence seem to be increasing in frequency relatively to the lessened number of thoracic recurrences. And this phenomenon is clearly seen only in the results of the more successful operators—i. e., of those whose methods enable them to guard against thoracic invasion. The relative excess of abdominal recurrences associated with modern methods of operation is strikingly exhibited in the cases, upwards of 100 in number, published by Watson Cheyne. Visceral recurrence took place in 15 cases. In ten of these cases the recurrence was (clinically) abdominal, while in only five was it (clinically) thoracic. It seems almost certain that in some of these cases abdominal recurrence might have been prevented by a wider excision of the deep fascia in the epigastric region. Handley believes that a recognition of the danger of epigastric invasion and the adoption of precise means for its prevention will bring about a further appreciable reduction in the mortality from mammary carcinoma.

8. Nature of Diabetes Mellitus.—In concluding this series of lectures Bosanquet sums up the views suggested by him as embodying a possible explanation of the phenomena of diabetes and the arguments by which they were reached as follows: 1. Excess of sugar in the blood, which is the condition precedent of glycosuria, may be caused by over-production of sugar in the system or by diminished use or excretion. There is practically no evidence of either of these last processes. There is convincing evidence that at one stage, at all events, of diabetes there is increased production. 2. Over-production of sugar may depend on some digestive irregularity whereby more sugar than normal is poured into the blood from the food, or of manufacture of sugar from the tissues of the body. We have sufficient evidence that both these processes are at work in diabetes, in that, at first, the output in the urine can be controlled by limiting the diet, whereas later this is not possible. But, whereas there are a considerable number of conditions in which sugar appears in the urine apparently as a result of absorption of additional sugar from the alimentary canal—these conditions being identical with diabetes only in the single fact of the appearance of sugar in the urine, while they run an entirely different clinical course—it is in diabetes alone that we have at any time evidence of formation of sugar from the tissue cells of the patient. This autolytic formation of sugar, if it may so be called, is the characteristic feature of diabetes in so far as the production of sugar is concerned. 3. It involves less of an assumption to suppose that this autolytic formation of sugar is present in diabetes all through the disease than to suppose that it ensues after a time as a result of the presence in the blood of excess of the very substance—sugar—into which the cells finally break down. The absence of proof of the existence of this process in the early stages of the disease, when the glycosuria is controlled by diet, may be due to the body possessing a certain power of utilizing sugar in its nutritive processes, so that only the excess above a definite quantum appears in the urine. 4. There is sufficient evidence available to establish beyond the possibility of doubt the fact that there is some connection between the pancreas and diabetes. Although it is not yet proved, yet it is becoming increasingly probable that the pancreas is diseased in all cases of diabetes mellitus. An increasing bulk of evidence is also accumulating to show that the function of the pancreas, which is in abeyance in diabetes, is normally performed by certain special groups of cells known as the islands of Langerhans, which are distinct from the ordinary secreting cells of the gland, but which are not improbably formed from the acini. The special lesion of these islands—hyaline degeneration—which has been associated with diabetes by some writers—is not present in all cases of the disease and may be found (in a less developed state) in other conditions. 5. The action of the pancreas may be exerted in the direction either of supplying a substance necessary for the assimilation of sugar by the cells of the body, or in that of counteracting a poison which in some way causes accumulation of sugar in the blood. There is little or no evidence in favor of the former possibility; in favor of the latter there are the results of experimental intoxication with phloridzin, with suprarenal extract, and with other substances, and a few inconclusive results obtained by injection of secretions derived from diabetic patients. 6. We are not yet in a position to state with any certainty what tissue in the body gives rise to the sugar formed in diabetes. The theoretical possibility that sugar may be derived from fat is supported by certain observations which prove that a serious disturbance of the adipose tissue exists in diabetes. Further, if this hypothesis be admissible, a certain unity will be introduced into our conception of diabetes, the phenomena of which will be explicable as manifestations of a single process occurring in a single tissue. 7. Lastly, glycosuria, as opposed to diabetes, may be due to mere excess of sugar poured into the blood from the alimentary canal in excess of what the system is capable of assimilating; or it may be due to causes acting analogously to the diabetic puncture of Claude Bernard and leading to a discharge of sugar by the liver from its stores of glycogen. If, continues Bosanquet, the views here set forth are correct, it follows that in its earliest stage the diabetic process may constitute rather a predisposing cause of glycosuria than the actual cause of the phenomenon, since the breaking down of the tissue cells into sugar is at first not more than sufficient to saturate the sugar-assimilating powers of the system. At this stage a slight increase of saccharine food will produce glycosuria—an increase which in a normal person would not have this effect. Similarly a slight nervous shock, sufficient to cause the liberation of only a comparatively small quantity of glycogen from the liver, would also augment the sugar present in the blood above the point at which it appears in the urine. In such a way the onset of true diabetes might be ascribed to a shock, when in reality it was previously existent, but unnoticed. As far as definition is possible, then, diabetes might be defined as an increased internal dissociation of tissue (possibly fat) into sugar, caused by a toxic substance which is produced in the course of normal metabolism and which is normally neutralized by the pancreas.

9. Gallstones and Cancer.—A very interesting report is made by Slade based on cases that have come to autopsy at the London hospital during the last twenty-six months. In 2180 necropsies there were 33 cases in which gallstones were found either in the gall bladder, or where they had been removed by operation shortly before death. In 17 of these 33 cases, the gallstones were latent and were discovered only at the autopsy. In the remaining 16 cases, the gallstones and complications caused thereby were responsible for the patient's death. Carcinoma of the gall bladder was found in 30 per cent. of all cases of gallstones, and in 56 per cent. of all cases where gallstones had caused symptoms during life, and in 58.8 per cent. of all cases in which at the necropsy the wall of the gall bladder showed inflammatory thickening. Slade concludes that the association between carcinoma of the gall bladder and gallstones is very close, and that gallstones may be looked on as the determining cause of cancer of the gall bladder.. Thickening of the wall of the gall bladder is presumptive evidence of carcinomatous change. Cholecystectomy should be performed, whenever possible, if any thickening of the wall of the gall bladder be found at the time of operation.

14. **Cerebrospinal Manometer.**—The instrument devised by Eve for measuring the cerebrospinal pressure consists of the lumbar puncture needle, which is adapted, on the one hand, to a vertical graduated glass tube, and, on the other, to an exit tube closed by a spring clip, and a detachable handle. In addition to three hollow needles, suitable for children, large or small adults, the case also contains a hydrometer for measuring the specific gravity of small quantities of the cerebrospinal fluid. Just before use the whole apparatus is boiled and brought to the bedside in a dish of boiled water. The puncture is made in the usual manner. The fluid runs up the manometer tubing (the exit tube having been previously clamped) and its pressure can be read off. The needle is withdrawn when the pressure is sufficiently reduced or the requisite amount of fluid has trickled out. The apparatus shows clearly the oscillations in cerebrospinal pressure produced by the pulse and respiration. Lumbar puncture has been performed about 60 times with this instrument without any ill effects.

Journal of Tropical Medicine, London.

April 15.

15 Undescribed Form of Ulceration of the Large Intestine, probably of Amebic Origin, Causing in Some Cases Abscess of the Liver. T. C. Mugliston and G. D. Freer.
16 *Treatment of Malarial Fever by Intramuscular Injections of Quinin. L. E. Ashley-Emile.
17 Tabes Mesenterica and Ceylon Soremouth and Diarrhea. W. A. Wijeyesakere, England.

16. **Intramuscular Injections of Quinin in Malaria.**—Fifty cases of malaria have been treated in this manner by Ashley-Emile. He is of the opinion that this plan should not be adopted as a routine therapeutic measure for all cases of malaria, but should be reserved as an invaluable adjunct to the ordinary method for intractable cases where quinin can not be administered and tolerated by the mouth, as in certain remittent and pernicious types of the disease, when accompanied with excessive vomiting and pronounced nervous symptoms, with delirium, and especially in malarial coma. Quinin injections are inadvisable in all cases suffering from any ulcerative septic disease, and in very young children. Ashley-Emile has found this plan most effective in reducing the temperature of persons who have by excessive daily usage established a tolerance for the drug, and in whom forty to sixty grains of quinin given by the mouth have failed to produce the desired result, when a single injection of five grains of quinin has lowered the temperature. He has made it a routine practice to exhibit quinin injections if on the third day the temperature still remains high without any signs of abatement, and without the least hesitation if the patient has been addicted to large doses of quinin as a prophylactic measure. The advantages this method has, in addition to those mentioned, are economy, and certainty and rapidity of action. The injection should be made deep into the deltoid and interscapular muscles, using the hydrochlorid of quinin.

Annales de l'Institut Pasteur, Paris.

Last indexed page 165.

18 (XVIII, No. 9.) Sur l'accoutumance à la tuberculine (means to detect habituation to tuberculin in cattle). H. Vallée (Alfort).
19 Production d'acide citrique par les citromyces. P. Mazé and A. Perrier.
20 *De l'influence de l'ingestion des bactéries et des produits bactériens sur les propriétés du sérum sanguin. A. Tchitchkine.
21 Mal de caderas chez les animaux domestiques et sauvages. Epidémies parallèles (trypanosoma affection in domestic and wild animals in Paraguay). M. Elmassian and E. Migone.
22 Tuberculose osseuse et troubles circulatoires et trophiques. N. Petroff.
23 (No. 10.) Les propriétés des antisensibilisatrices et les théories chimiques de l'immunité. J. Bordet.
24 Recherches sur la glycolyse des organs des mammifères. P. Portier.
25 Rabies in "Egyptian Rat."—La rage chez la mangouste ichneumon. C. Nicolle and J. Chaltiel (Tunis).
26 Virulence of Salivary Glands in "Passage Rabbits."—Virulence des glandes salivaires chez les lapins de passage. Id.
27 La rage expérimental chez le rat. Id.
28 (No. 11.) *Etudes expérimentales sur la syphilis. E. Metchnikoff and E. Roux.
29 Sur la composition chimique et la formule de l'adrénaline. G. Bertrand.
30 Agglutination of Red Corpuscles by Chemical Precipitates and Suspension of These Precipitates in Colloidal Media.—Agglutination des globules rouges par les précipités chimiques, etc. O. Gengou.
31 *La fièvre typhoide expérimentale. J. Atlassoff.
32 Bactérium Zopfil (Kurth). N. Swellengrebel.
33 (No. 12.) Recherches sur l'assimilation de quelques substances ternaires par les végétaux à chlorophylle. P. Mazé and A. Perrier.
34 *Tétanos et quinine. E. Vincent.
35 Coloration des protozoaires. F. Marino.
36 Importance de l'examen bactériologique pratiqué sur les cadavres. R. B. H. Gradwohl.
37 (XIX, No. 1.) Recherches sur le sérum antirabique. A. Marie.
38 Culture de l'amibe de la dysentérie des pays chauds (tropical dysentery). A. Lesage.
39 El-debab. Trypanosomiase des dromadaires de l'Afrique du Nord. E. Sergent.
40 *Diagnostic histologique de la rage. F. Abba and A. Bormans (Turin).
41 Peste endémique, bubons climatiques, lymphangite infectieuse de la *Reunion et erysipèle* de Rio. Thiroux.
42 (No. 2.) Recherches morphologiques et experimentales sur Trypanosoma Paddæ. Thiroux.
43 Hémolysines naturelles. G. Mioni.
44 Distribution of Microbes in Infant's Intestine.—Repartition des microbes dans l'intestin du nourrisson. H. Tissier.
45 Determination quantitative du coli-bacille dans les eaux d'alimentation (in drinking water). A. Gautié.
46 (No. 3.) Etudes epidémiologiques et prophylactiques du paludisme en Algérie, en 1904. E. Sergent.
47 *Les tumeurs de la souris (of mice). Haaland (Christiania).

20. **Influence of Ingested Bacteria on Serum.**—Adult rabbits fed with living and killed typhoid bacilli did not develop anything resembling typhoid fever, but their serum acquired properties revealing the presence of agglutinins, fixators and sometimes precipitins. Young rabbits did not respond in this way, possibly because the absorption was less, or because their undeveloped organism was unable to respond with the production of these substances.

28. **Syphilis in Monkeys.**—In this third communication on this subject Metchnikoff and Roux relate further experiences and show the results in colored plates. They are convinced of the syphilitic nature of the lesions observed on the small monkeys (macaques). Their transmission to the chimpanzee and the development of both primary and secondary lesions on the latter is further proof. They believe that the prospects are good for obtaining a specific vaccine by passing the virus through the smaller monkeys, possibly combined with specific antiserums.

31. **Experimental Typhoid Fever.**—Atlassof has succeeded in inducing experimental typhoid fever by feeding very young rabbits with the germs.

34. **Tetanus and Quinin.**—Vincent's attention was attracted to the number of cases that have been reported in which tetanus followed an injection of quinin under aseptic precautions. He has been experimenting and reports that quinin injected into rabbits at the same time or following inoculation with tetanus germs, had an unmistakable action in favoring the development of the tetanus. This action was both local and general. As an instance he mentions that inoculation with tetanus on the other side of the body from an injection of quinin, was followed by symptoms of tetanus and the germs were found congregated, not at the point of inoculation, but at the point where the quinin had been injected, on the other side of the body. This favorable action occurs apparently only when the quinin is injected subcutaneously. The facts related suggest that when an injection of quinin is to be made in a person who has any sores or excoriations liable to shelter or allow the entrance of the tetanus bacillus, it would be wise to inject antitetanus serum at the same time.

40. **Histologic Diagnosis of Rabies.**—The facts reported from Turin by Abba and Bormans are practically the same as those summarized recently on page 1490. A list of 93 tests is given showing the complete concordance between the biologic test for the Negri bodies in the hippocampus major of the suspected animals and the results of Volpino's simple staining test. This requires merely 4 or 5 c.c. of a 10 per cent. solution of osmic acid in a test-tube with the sections of the tissue to be examined. It is left in contact for five or six hours, then rinsed under running water, when it is ready to be examined with the microscope. The Negri bodies have been found in the 10 human brains examined.

47. **Tumors on Mice.**—Haaland rejoices that we are entering on a new era in the matter of cancer. It has become a disease

that can be studied experimentally, he says, and no longer, as formerly, only at the bedside or on the cadaver. Moreau, Jensen and Borrel have demonstrated the inoculability of cancer by grafts of cells; Jensen has studied the nature of the tumors obtained by inoculation, and has commenced serotherapy; Borrel has rendered probable the infectious character under natural conditions, and, hence, the existence of a virus. Haaland's own researches have been with white mice, and he gives a number of plates of the epithelial tumors which he encountered on white mice and which generally displayed the characteristics of malignant tumors. Certain forms bear the closest resemblance to human cancer. The most frequent type displayed the characteristics of an infectious disease, with epidemic or endemic features in some instances. The introduction of a mouse thus affected into a cage of mice previously apparently sound resulted in the development of similar tumors on some of the other mice. This was especially noticeable in case of the epithelioma on the jaw and the malignant lymphoma of which he gives illustrations. Three of these forms produced metastases by cellular embolism; two others by way of the blood in the pulmonary vessels, and another by way of the lymphatics in the ganglia. Cancer cells may continue to grow when grafted into another animal. Certain small tumors noted in the lungs of the cancerous mice suggest the possibility that the cancer virus brought to the spot induced the proliferation of the epithelial cells at this point—not, strictly speaking, a metastasis. The intracellular inclusions, he thinks, can generally be explained as the relics of leucocytes which have made their way into the cancer cells.

Bulletin de l'Académie de Médecine, Paris.

48 (Year LXIX, No. 15.) Sur les vaisseaux sanguins des organes génito-urinaires du *périnée et du pelvis* (blood vessels of perineum and pelvis). Farabeuf.
49 *Anévrisme traumatique du tronc tibio-péronier ou de l'artère tibiale postérieure près de son origine, guéri par des injections sous-cutanées de sérum gélatiné. *Le Dentu.*

49. **Cure of Aneurism of Tibial Artery with Gelatin.**—Le Dentu reports the case of a young man who cut his leg, resulting in the development of a large aneurism at the bifurcation of the popliteal artery, with a pseudo-aneurism from distension of the cicatrix in the vessel. Extirpation of the sac would probably have required ligation of the anterior and posterior tibial arteries and of the peroneal. Before attempting such a serious operation, he injected 200 c.c. of 2 per cent. gelatinized serum, sterilized at 115 C. The injection was made in the buttocks. It was preceded by flexing the thigh on the leg as a means of controlling the blood supply. Seven injections were made in the period between November 23 and January 21, 1905, and at the latter date there was no trace of the aneurism except a minute hard bunch where the trauma had occurred. The patient was kept in bed a month longer, and was then completely well. Pulsation in the posterior tibial is *normal*.

Presse Médicale, Paris.

50 (No 25, March 29.) De la fréquence de l'angine à spirilles et bacilles fusiformes. H. Vincent.
51 Sanitary Inspection of Schools. Aid of Fathers.—L'inspection sanitaire des écoles participation des pères de famille à cette inspection. H. *Surmont (Lille).*
52 Pastes in Dermatology.—De l'emploi des pâtes en dermatologie et pour le pansement des plaies superficielles. L. M. Pautrier.
53 (No. 26.) Application de l'extension continue aux fractures obliques *de* jambe (of the leg). L. Ombredanne.
54 *Lab-ferment et digestion lactée (of milk). L. Meunier.
55 Balnéothérapie et electrothérapie dans le *rachitisme*. J. Comby.
56 (*No.* 27.) L'intervention chirurgicale dans l'appendicite. J. L. Faure.
57 Foie flottant (floating liver). A. Martinet.
58 (*No.* 28.) Un téléphone modèle: le monophone. E. De Lavarenne.
59 Paralysie générale et syphilis. L. Marchand.
60 Traitement des dystrophies musculaires et des dystrophies générales par les mouvements actifs. P. de Champtassin.
61 (No. 29.) *Cytodiagnosis in Mumps.—Cytologie parotidienne des oreillons. J. A. Sicard and Ch. Dopter.
62 Conférences sur le secret professionnel et l'avortement criminel (abortion). P. A. Lop.

54. **Lab Ferment and Digestion of Milk.**—Meunier has been studying the substance in the *stomach* which coagulates casein and has found that the amount varies within wide limits in different persons. Those with small proportions of this lab ferment are the ones who find difficulty in digesting milk. His research has shown that there is a close connection between the secretion of this substance and the digestion of fats. This is due, he thinks, to the way in which the lab ferment retards the passage of the milk along the intestinal canal, thus enabling it to be submitted longer to saponifying influences and thus favoring the absorption of the fat during the intestinal digestion. Defective digestion of the fat in milk, from absence of the lab ferment, may engender the intestinal troubles noted in some persons on a milk diet. He describes a method for determining the proportion of lab ferment in the stomach contents.

61. **Cytodiagnosis of Mumps.**—Sicard and Dopter obtain saliva directly from the parotid gland by introducing a short piece of a fine sound through the excretory duct of the gland. The saliva drips from the sound and is easily collected for examination. That taken from 32 persons free from mumps contained very few cells, not more than one or two to the field, but the saliva from 52 persons with mumps showed pathologic almost from the onset in 49 out of 52. It is easy by examining the saliva from the gland in this way to differentiate parotitis at any stage and to reveal the parotitic origin of certain affections of the testicles.

Semaine Médicale, Paris.

63 (XXV, No. 13, March 29.) *Preserves et conserves.
64 *Identity of Fourth Disease with "Scarlatinal Rubella."—L'identité de la "quatrième maladie" avec la "rubeole scarlatineuse." L. Cheinisse.
65 Effects of Humanitarian Bullets.—Les effects des balles dites "humanitaires."
66 (No. 14.) *L'asthénie. P. Londe.
67 (No. 15.) La notion de l'hérédité dans ses applications sociales. Editorial.
68 *Le pityriasis versicolor du thorax, signe indirect de la tuberculose pulmonaire au début. L. E. Bertrand.

63. **Preserves and Conserves.**—THE JOURNAL recently summarized an article by Ekelof on the diet in Arctic trips which used the term preserves and conserves in a special sense. The *Semaine Médicale* hails this use of the terms as destined to be generally adopted in medical literature. He restricts the term "conserves" to articles of food sealed in airtight cans, jars or bottles. The term "preserves," on the other hand, he applies in a more general way to food stuffs preserved from decomposition by any method, salting, smoking, freezing, sterilizing by heat, etc. Medical language has had no special word hitherto for articles of this class.

64. **Fourth Disease.**—Cheinisse sifts the literature on the subject of Dukes' "fourth disease," coming to the conclusion that it is identical with scarlatinal rubella. It is not a rubella, however, and he thinks that the proper name for it should be "epidemic pseudo-scarlatina." This locates and defines its characteristics and recognizes its autonomy.

66. **Asthenia.**—Londe's study of asthenia concludes with the remark that it is rather beneficial than otherwise in chorea, Addison's disease, peritonitis from perforation, diabetes or fever from any cause. The repose to which it condemns the patient husbands his strength. It should be respected, at least at first, and treatment should aim to second nature. Asthenia is sometimes a sign of cerebellar origin, but much more frequently it is of visceral and abdominal or sympathetic origin. The sympathetic is the source even in such widely differing conditions as peritonitis, grippe, diabetes, exophthalmic goiter, muco-membranous enteritis, melancholia, etc. The frequent association with the asthenia of vasomotor or secretory disturbances is the proof of this intervention of the sympathetic. Asthenia is evidently a morbid function of the great sympathetic in the same way as anguish seems to be the function of the bulbar centers of the sensory pneumogastric. He describes the anatomic relations between the cerebellum and the sympathetic which bring this to pass, adding that the same peripheral motor neuron or its vascular territory is interested both in simple asthenia and in absolute paralysis. In the former the trouble is merely functional, while in the latter there is some lesion. The rule to examine the state of the abdominal functions in every case of illness that presents itself, is even more imperative in case of asthenia, for the most frequent cause of the latter is in some disturbance in the abdominal sympathetic. Tonics are required only subordinately,

and stimulants are not really indicated except in case of extremely acute asthenia.

68. **Pityriasis Versicolor Sign of Tuberculosis.**—Bertrand stated that almost always when he has observed pityriasis versicolor on the thorax the patient was thin, easily catching cold, coughing a little but not expectorating, and the further course revealed that the pityriasis had been an accompaniment of incipient tuberculosis. This combination of tuberculosis with the cutaneous affection has been so constant in his experience that he regards it as the rule, and always examines for tuberculosis so soon as he notes the other.

Archiv f. Gynäkologie, Berlin.

Last indexed page 1568.

69 (LXXV, No. 1.) *Remote Results of Instrumental Dilation.—Spätfolgen des Entbindungsverfahrens nach Bossi. F. Lichtenstein.
70 Metabolism in Pregnancy.—Beitrag zur Kenntnis des Stoffwechsels während der Schwangerschaft. C. Hahl.
71 Beiträge zur Kenntnis der soliden Ovarial-Tumoren. A. Glockner.
72 Organ-Anlagen in den Ovarial-Embryomen mit besonderer Berücksichtigung pathologischer Vorgänge. Offergeld.
73 Ahlfeld und seine intrauterine Atmung (respiration). M. Runge.

69. **Remote Results of Mechanical Dilation.**—Lichtenstein has examined 18 women long after instrumental dilatation with the Bossi dilator, and found no evidences of injury from the instrument. In 4 cases there were small and in 2 larger lacerations of the portio, and in 1 there was a bilateral laceration of the cervix, but no parametritic changes could be discovered which could be attributed to the mechanical instrumental dilatation.

Berliner klinische Wochenschrift.

74 (XLII, No. 13, March 27.) *Ueber die parasitäre Theorie in der Aetiologie der Krebse (of cancers). E. v. Leyden.
75 *Die biogenetische Theorie der Geschwülste und die Aetiologie des Carcinoms. O. Israel.
76 *Aus dem Gebiete der Hydrotherapie. L. Brieger.
77 *Chronic Inflammation of the Lungs in Heart Disease.—Chronische Lungenentzündungen bei Herzkranken. D. Rothschild.
78 *Etiology of Malignant Tumors.—Was wissen wir über die Ursache der bösartigen Geschwülste. v. Hansemann. (Concluded.)
79 Ueber Wesen und Behandlung des Plattfusses (flat foot). C. Helbing.

74, 75 and 78. **Etiology of Cancers.**—These articles were summarized in the Berlin letter on page 1207.

76. **Hydrotherapy.**—Brieger is in charge of the Institute for Hydrotherapy connected with the Berlin University. In his address delivered at the twenty-sixth congress of the German Balneologic Association, held at Berlin in March, he demonstrated how the benefits of hydrotherapy are becoming better and better realized and how it is overcoming the prejudices of all. He stated that 70,000 different applications of hydrotherapy have been given at his institute, more than 10,000 patients having passed through his hands, and 93 scientific works have issued from the institute. He has had the training in hydrotherapy of 440 physicians from Germany and abroad, and of 283 students. He here reviews some of the principles of the science, among them the intensity of the action of hot water baths in chlorosis, nephritis, syphilis, and for young gouty subjects. Winternitz has established that these hot baths accelerate the oxidation processes more even than fever. Krebs and Mayer have also demonstrated that this form of hydrotherapy alone is able to change the number of blood corpuscles and the specific gravity of the blood. Local applications of heat in gout are made preferably with cotton wrung out of hot water and covered with rubber tissue. He has been ordering patients with chronic rheumatism or gout to drink a quart to a quart and a half a day of distilled water for a month or two. He has never noted any inconveniences from it nor any striking benefit. Corpulent persons are given exercise in tanks of water after a light bath and rub down. More and more water is allowed to flow into the tank and the temperature is constantly reduced, and the patient is instructed to keep the water constantly in motion, with an occasional rest.

77. **Chronic Inflammation of the Lungs and Heart Disease.**—Rothschild expatiates on the immunity to tuberculosis conferred by mitral stenosis. The congestion in the lungs caused by this defect seems to act in the sense of Bier's passive hyperemia and prevent the development of secondary tuberculosis. It is possible for a mitral defect to become installed after tuberculous lesions are already established, but the conditions then favor the cure of the primary lesion. Tuberculosis has no influence in preventing the development of a mitral or other cardiac defect. Kryger found only 10 out of 1,100 tuberculous cadavers with evidences of a heart defect, but he found 59 cases of healed or arrested tuberculosis in cadavers with pronounced heart defects. Cardiac defects seem to favor the development of other pulmonary affections besides tuberculosis. Rothschild has had occasion to observe 5 cases presenting a triad of organic affections, involving the myocardium or pericardium, the pleura and the lower lobe of the lung, a chronic fibrous process resulting from a primary inflammation of the connective tissue.. The primal disturbance is usually pleurisy and generally on the right side. This is followed by induration of the lower lobe; the spread of the process to the pericardium is manifested by arrhythmia. One of the patients is a woman of 41 who does not seem much incommoded by the severe changes evidenced by the arrhythmia, violent catarrh and infiltration of the lower lobe. The second patient is a woman of 63, and her trouble dates from 1872. She is occasionally disturbed by slight hemorrhage, but her mitral insufficiency and stenosis with aortic insufficiency have not prevented her from increasing in weight from 97 to 112 pounds in the last two years. A third patient is a woman of 42 with frequently recurring pericarditis and pleurisy who yet keeps in comparatively good health. He has never encountered but one man presenting this syndrome. Tuberculosis was excluded in each case by repeated examination of the sputa. Syphilis was probable in one case. Potassium iodid seemed to influence these cases favorably, as also carbonated baths and inhalations.

Centralblatt f. Chirurgie, Leipsic.

Last indexed page 1322.

80 (XXXII, No. 12.) Zur Korrektur des kongenitalen Klumpfusses (club foot). Nobe.
81 (No. 13.) Ossification in Goiters.—Ueber Knochenbildung in Strumen. E. Sehrt.
82 *Cachexia und Tetania thyreopriva. Lanz.

82. **Cachexia and Tetania Thyreopriva.**—Lanz has been experimenting for some years with thyroidectomized goats, using them for serothapy or breeding purposes. Among the 30 goats thus thyroidectomized at Berne only one developed acute tetania thyreopriva immediately after the operation. All the others exhibited cachexia in varying degrees or no disturbances at all, with no evidences of tetany. During the two years since he has resided in Amsterdam 20 goats have been thyroidectomized and he has been surprised to note that 9 of them developed tetany to which they succumbed in a few weeks. The thyroidectomy was done by the same person and by the same technic in every instance, and this striking difference in the results in Switzerland and Holland suggests some variation in the thyroid gland from the difference in climate, soil or something of the kind. Kocher and Reverdin at Berne and Geneva used to witness cachexia or operative myxedema follow total extirpation of the thyroid in the clinic, while Billroth in Vienna beheld tetany develop instead under the same circumstances. Lanz noticed ten years ago that the thyroid gland is degenerated much more frequently in Switzerland than elsewhere both in human subjects and in cattle, the latter in comparison with the imported Italian cattle. He suggests that experiments with a parathyroidin, made like adrenalin, might yield interesting results.

Centralblatt f. Gynäkologie, Leipsic.

Last indexed page 1322.

83 (XXIX, No. 12.) *Das Eklampsie-Gift (toxin). A. Dienst.
84 Perforator That Does Not Slip.—Ein neues Perforatorium zur volkommenen Sicherung gegen das Abgleiten. P. Zweifel.
85 (No. 13.) Changes in Ovaries with Hydatiform Mole and in Pregnancy.—Zur Frage der Ovarialveränderungen bei Blasenmole und bei normaler Schwangerschaft. J. Wallart.
86 Id. with Syncytial Tumors and Hydatiform Mole.—Id. bei syncitialen Tumoren und Blasenmolen. S. Patelleni.
87 Intrarenal Tension as One of the Causes of Eclampsia.—Intrarenale Spannung als eine der Ursachen von Eklampsie. A. Mynlieff.

83. Pathogenesis of Eclampsia.—Dienst suggests that the cause of puerperal eclampsia may be sought in an abnormal communication between the circulatory systems of the mother and the fetus. He found that methylene blue injected into the umbilical cord immediately after delivery, caused the mother's urine to show traces of the stain in about a fifth of the cases, not in the others. Milk injected likewise into an umbilical artery or vein oozed from some of the larger vessels on the maternal surface of the placenta. His experiments were made with placentæ from 15 eclamptic women and also with 355 placentæ from normal childbirths. In 160 women thus tested one-fifth showed this phenomenon of blue urine. He further experimented with 3,452 mixtures of the blood of mothers and fetuses in 118 cases. In 24 instances he found that the maternal blood agglutinated or dissolved the fetal blood, acting like a heterogeneous blood. In 15 of these women the urine showed no trace of the stain after injection of the methylene blue into the placental vessels. All of these 15 women had had normal childbirths. The other women showed the blue urine, and 7 had developed eclampsia while the other 2 had exhibited severe albuminuria. He proposes, therefore, the theory that eclampsia is nothing more than the effect of transfusion of the heterogeneous fetal blood into the maternal circulation, that is, the effect of abnormal permeability of the placenta. He presents a number of further arguments to sustain this assumption.

Deutches Archiv f. klinische Medicin, Leipsic.

Last indexed page 993.

88 (LXXXII, Nos. 3-4.) Ueber das photodynamische und optische Verhalten der Anthracinone (behavior of anthraquinones). H. v. Tappeiner.
89 *Zur Behandlung der Haut-Carcinome mit fluorescierenden Stoffen (treatment of cutaneous cancer with fluorescent substances). A. Jesionek and H. v. *Tappeiner.*
90 2 Fälle von Atresie der Pulmonalis. Koller.
91 *Zur klinischen Diagnostik der intrathorakalen Erkrankungen. A. Grober.
92 Zur diagnostischen Bedeutung der Hämatemesis bei Appendicitis. Krehl.
93 Zur Kenntnis der Komplikationen *der Polyarthritis* rheumatica acuta von seiten der Haut (cutaneous complications). G. Riebold.
94 Bactericidal Action of Human Serum Against *Typhoid* Bacilli.—Ueber die bakterizide Wirkung des menschlichen Blutserums gegenüber Typhusbazillen (Nachweis des Zwischenkorpers). G. Hahn.
95 Id. in 60 Typhoid Patients.—Weitere Untersuchungen über die bakterizide Reaktion des Blutserums der Typhuskranken. Korte and Steinberg.
96 *Ueber suggestives "Injektions-Fieber" bei Phthisikern. F. Köhler and M. Behr.
97 Zur Serum-Therapie *fibrinösen Pneumonie.* H. Püssler.
98 Zur Kenntnis der Bence-Joneschen Albuminurie. F. Reach.
99 Relations Between Motor Functions of Stomach and of Intestines.—Zur Frage der Beziehungen zwischen Magen und Darmmotilität. E. Velel.

89. Treatment of Superficial Cancer with Fluorescent Substances.—The 6 cases described showed marked improvement after injection or superficial application of fluorescent substances. The benefit seemed to be merely transient in some of the cases. The exposures after the application of the photodynamic substances were as extensive as possible, both sunlight and the arc light being used. The lesion was ulcus rodens in most cases.

91. Signs of Intrathoracal Affections.—Gröber expresses surprise that such scant attention is paid to the variations in the pupil reaction in incipient intrathoracal affections. A tuberculous apical affection is almost certain to cause iritation of the sympathetic and consequent dilatation of the pupil on that side, even from its very incipiency. The findings in Valsalva's experiment also differ from normal if there is any inflammatory process in the thorax. The large veins on the affected side swell up sooner and more prominently than on the other. The pupils also behave differently in Valsalva's experiment in case of an intrathoracal morbid process. The percussion findings over the manubrium are also different. A difference in the pupils after a deep inspiration is a sign of something wrong in the upper segment of the thorax. He has observed unilateral pulsus paradoxus with pleural adhesions in 3 cases.

96. Suggested Fever in the Tuberculous.—Köhler and Behr relate that in 10 out of 40 tuberculous persons who were given a sham tuberculin injection—water being used instead of the tuberculin—the temperature rose and headache, depression and lassitude were observed the same as in a positive tuberculin reaction. The same effects were observed also in 6 out of 20 persons, who were given merely a puncture without injection of any fluid. The temperature rose from .4 to 2.4 of a centigrade degree and remained high for about four hours in the majority, but in four cases the fever persisted for six to sixteen hours.

Deutsche medicinische Wochenschrift, Berlin and Leipsic.

100 (XXXI, No. 13.) *Prostata-Sekret und Prostatitis. Ein Beitrag zur Entzündungsfrage. C. Posner and L. Rapoport.
101 *Action of Roentgen Rays on Glands.—Ueber die Wirkung der Röntgenstrahlen auf Drüsen. A. Buschke and H. E. Schmidt.
102 *Sound in Intestines.—Ueber Darmsondierung. E. Rosenberg.
103 *Early Symptoms of Cancer in Throat.—Zur Kenntnis der Frühsymptome maligner Tumoren des Nasenrachenraums. Stenger.
104 *Superheated Air in Nervous Affections.—Ueber Heissluftbäder bei Nervenkrankheiten. L. Jacobsohn.
105 Industrial Hygiene.—Gewerbehygienische Rundschau. E. Rath.
106 *Medical Indiscretions.—Aerztliche Unvorsichtigkeit. Neuhaus.

100. Prostatitis Viewed from New Standpoint.—Posner and Rapoport argue to the effect that the secretion of the prostate has many points in common with milk and colostrum. The granulations in the prostatic fluid consist of lecithin, which is secreted by the epithelium the same as the milk fat in the breast. Whenever, for any reason, the secretion fails to find a free outlet leucocytes migrate into the gland and the leucocytes devour the lecithin granules by phagocytosis. Certain cases of chronic inflammation of the prostate are merely this combination of circumstances; the infectious element is absent. The disappearance of the lecithin granulations from the fluid is merely the result of stagnation of the secretion with consequent inroad of leucocytes and their incorporation of the lecithin. If the mechanical obstacle to the escape of the secretions can be removed, the secretions find an outlet, the leucocytes cease to flock into the gland and the inflammation subsides. This class of cases is the one benefited by massage, hydrotherapy and electricity. In the presence of chronic prostatitis, therefore, it is of the utmost moment to determine whether the inflammation is of infectious origin or is the result of mere obstruction to the outflow of the secretion.

101. Action of Roentgen Rays on Glands.—In Buschke's experimental research the kidneys and testicles reacted in a different manner to the *x*-rays. The kidneys did not react except after very vigorous exposures, and then with a severe destructive process. In the testicles, even after comparatively slight exposures, extreme atrophy resulted, without traces of inflammation. Further experimental tests showed that the Roentgen rays were able to suppress the sweat secretion without appreciable injury to the skin or sweat glands. A case of hyperidrosis of the hands was treated with the *x*-rays. After a few exposures the sweat secretion was entirely suspended in the parts exposed and in the vicinity, without any appreciable injury to the skin. Pusey, Stelwagon and Müller have reported similar success in treatment of excessive perspiration.

102. To Introduce the Tube High Up in the Bowel.—This communication from Albu's clinic describes considerable research in this line. The final conclusion is that the "rectoromanoscope" is indispensable. With its aid it is possible to introduce the tube much higher than without it, and medicines can be applied directly to the points where needed, either as a fluid or dry powder. Without direct visual inspection it is generally impossible to introduce the tube beyond the entrance of the sigmoid flexure, but with it the tube can be passed to the middle of the flexure, and, under specially favorable conditions, as far as "Schiefferdecker's point," the left margin of the small pelvis. The tube is arrested at this point and attempts to introduce it further merely result in its rolling up on itself. Of all the tubes, sounds, etc., tested a 74 cm. long Jacques stomach tube, No. 12, proved the best adapted for the purpose. It was introduced with the subject in the knee-chest or knee-elbow position. A large number of persons submitted to the tests, the results confirmed by radiography.

103. Early Symptoms of Cancer in Throat.—Stenger emphasizes the importance of paying attention to symptoms on the part of the nose, obstruction, etc., especially symptoms involving the nasopharynx, also to symptoms of a neuralgic character and ear symptoms. Attention to all these symptoms will in many cases disclose incipient malignant disease of the nasopharynx when none, taken alone, would ever suggest it. Even slight symptoms on the part of the nose should compel examination of the nasopharynx, and obstinate neuralgia should never be dismissed as "mere neuralgia" without search for some objective lesion. The most important early sign of cancer is the development of ear symptoms ushered in by a catarrhal affection of the tubes with neuralgic disturbances.

104. **Superheated Air in Treatment of Nervous Affections.**—Jacobsohn has been applying superheated air in the treatment of all kinds of nervous affections, but has found little benefit from it in the organic troubles. On the other hand, many cases of peripheral and functional nervous troubles were much relieved, some of them to a remarkable extent. The local applications of superheated air thus proved a great aid in polyneuritis, in all forms of neuralgia (supraorbital, sciatica and lumbago), in professional neuroses, in sleeplessness from anemia, in hysteric troubles and in muscular joint rheumatism.

106. **Medical Indiscretions.**—Neuhaus preaches in regard to the necessity of extreme discretion in writing articles for the medical press. His text is an article on syphilis in a recent exchange in which a number of case reports are given. The cases are cited by both initials, with the place, age, profession, aspect and time of infection. These particulars have not the slightest bearing on the subject under discussion, but if the article should fall into lay hands the parties could all be easily identified from the descriptions, and serious trouble might result. This did actually occur in the case of a physician of Luxemberg who published a similar article in the *Wiener medicinische Zeitschrift* some time ago, referring to residents of his city. The parties were recognized and severe penalties were imposed on him. Both authors and editors should bear in mind the possibility of trouble of this nature from these superfluous details.

Mônatsschrift f. Geb. u. Gynäkologie.

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107 (XXI, No. 1.) Innervation der weiblichen Genital-Organe. P. Jung.
108 Skopolamin-Morphin-Narkose. H. Ziffer.
109 *Zur Kasuistik des widerholten Kaiserschnitts (repeated Cesarean section). L. A. Kriwski.
110 *Cholecystitis im Wochenbett (in puerperium). Christiani.
111 *Zur histologischen Diagnose bei Frühstadien von Uterus-Tuberkulose (in early stages). J. Schottlaender.
112 Zur Diagnose des Kystadenoms serosum papillare ovarii. E. Fraenkel.
113 *Methodisches Kompression als typisches Heil-Verfahren in der Gynäkologie. L. Pincus (Dantsic).
114 (No. 2.) Intrauterine Respiration.—Die intrauterine Tätigkeit der Thorax- und Zwerchfell-Muskulatur. Intrauterine Atmung. F. Ahlfeld.
115 Dauer der menschlichen Schwangerschaft (duration of pregnancy). A. Blau and R. Cristofoletti.
116 *Lumbal-Anästhesie in der Geburtshülfe und Gynäkologie. J. Müller (Greifswald).
117 Zur Wertschätzung der Myom-Operationen. E. Essen-Möller.
118 Zur Kasuistik der submukösen Myome. R. Katz.
119 (No. 3.) *Zur Indikation und Methodik der Sterilisation der Frau. O. Küstner.
120 Mechanism of Differential Development of Sex.—Zur diff. Entwicklungsmechanik des Geschlechts. Weill.
121 Die Extraktion nach Müller. J. Lovrich.
122. Severe General Manifestations from Compression of One Ureter in Pregnancy.—Fall von einseitiger Ureterkompression, etc. Ahlefelder.
123 *Ueber kriminellen Abort. Puppe.
124 Closure of Peritoneum After Vaginal Hysterectomy.—Zur Frage des Peritonealverschlusses nach vag. Totalexstirpation des Uterus, nebst Bericht über 56 ausgeführte Operationen. Schütze (Königsberg).
125 Spontan-Heilung des Chorionepithelioms (case of spontaneous recovery). C. Fleischmann.
126 Fall ausgetragener ektopischer Schwangerschaft (pregnancy at term). W. Hannes.
127 (No. 4.) Birth of Twins with Over Three Days' Interval.—Zwillingsgeburt mit 3½ tägiger Pause zwischen der Geburt des ersten und zweiten Zwillings. H. Cramer.
128 *Puerperaler Uterus und Curette bezw. Behandlung des Abortes. H. Langes.
129 Perforation of Living Child in Maternities.—Perforation des lebenden Kindes in geburtshülflichen Anstalten. R. Katz.
130 Weitere Beiträge zur Technik der mechanischen Dilatation. E. Pollak.
131 *Zur Aetiologie und Therapie der weiblichen Urogenital-Fisteln. O. Vertes.
132 Zur Kasuistik des Adenoma hidradenoides vulvæ. C. Fleischmann.
133 Zur Tuberkulose der weiblichen Genitalien. H. Thomson (Odessa).
134 Ueber die Thure-Brandtsche Methode. F. H. Kumpff.

109. **Repeated Cesarean Section.**—Kriwski has found in the literature records of 73 cases in which Cesarean section was done twice; 13, three times, and 3 with four Cesarean operations on the same woman. Nine of these twice repeated operations were by various Russian surgeons. One of the latter cases is described in detail, to show how simple and easy the second Cesarean section proved. The adhesions simplified it, but the musculature of the uterus reacted very sluggishly to the metreurynter.

110. **Cholecystitis in the Puerperium.**—Christiani is inclined to believe that the rarity of reported cases of cholecystitis after childbirth is due to the difficulty of differentiating such an affection. He describes 2 cases in detail and emphasizes the fact that fever in the puerperium is not inevitably due to puerperal infection, but may be the result of cholecystitis or of appendicitis. Both of the latter should always be excluded before we diagnose puerperal pyemia. As a general rule, he remarks, we should resort to the knife rather sooner during the puerperium than outside of it. The possibility of involvement of the liver is more menacing during pregnancy and the puerperium than under normal conditions, while the gravid and puerperal states do not affect the chances of the operation unfavorably. Both of his patients recovered under internal treatment alone. The signs on which he relied as speaking against puerperal pyemia were the frequent bilious vomiting with slight peritoneal irritation, and the full, slow pulse. Nothing indicated involvement of the liver. Pinard and others have published 3 cases cured by operation, although the true state of the case was not discovered until about the tenth day.

111. **Histologic Diagnosis of Incipient Tuberculosis of the Uterus.**—Schottlaender thinks that the discovery of a tubercle is not necessary for the diagnosis of tuberculosis. The finding of a few epithelioid cells surrounded by giant cells, even loose in a cavity, is a clue. He has made a point of examining scraps of mucosa from every patient curetted, regardless of the clinical history of the case. He found changes in the epithelium in 10. In some of these cases there was a concomitant tuberculous process elsewhere, but the findings were evidently not specific for tuberculosis, as they occurred in several healthy subjects after abortion or normal delivery. His research further demonstrated that the reaction to the presence of the tubercle bacillus is not invariably in the line of the formation of tubercles. The reaction may be merely tissue changes of indeterminate character, not at all what we are accustomed to regard as tuberculous processes.

113. **Therapeutic Systematic Compression in Gynecology.**—The method of treatment here described is based on scientific empiricism, Pincus remarks. It is a familiar fact that the classic four-in-hand, rubor, dolor, calor and tumor, is essenitally benefited by raising the limb, that is, by mechanically driving the blood out of the part. The effect is enhanced by compression applied in the form of a bandage wound around the limb from the periphery toward the center. An aching nerve can sometimes be relieved by pressing on it. Local compression for several minutes at a time or intermittently has cured a number of cases in his experience of clitoris onanism in case of indurated and edematous or hypertrophied clitoris, such as occurs in certain families. Local compression reduces the nervous sensibility and finally abolishes it. Local cold applications benefit temporarily, but leave an injurious after effect, while hot applications do good both temporarily and permanently. The mucosa is liable to react to cold with a catarrhal affection. Pincus applies mechanical compression as a means of stimulating the circulation of blood by driving the blood toward the comparatively empty heart. He accomplishes this in seven typical ways, or by a combination of several of them. Raising the lower part of the body sends the blood to the heart. He calls this autotransfusion, and when accompanied by exercise of the parts, active autotransfusion. Another means of filling the heart is by saline infusion or rectal injections or by drinking a .9 per cent. salt solution. Still another means is by exercises in breathing, by the care of the skin or by mechanical suppression of normal menstrual bleeding (tamponing the young and steam obliteration of the uterine lining in the woman near the climacteric or in hopeless invalids). The autotransfusion is promoted by a mechanical

device which he has invented. It is like a large, round rolling pin, bulging irregularly in the center or on one side, with which the abdomen is massaged. This drives a large wave of blood toward the heart. Another rolling pin device has a middle part like a wheel, with which the plexuses along the spine or the celiac plexus are compressed as the wheel is rolled over them. Another rolling pin is curved to fit over the abdomen. These devices are illustrated, and Pincus has just published in book form a complete, illustrated description of this mode of treating chronic anemic gynecologic affections. He calls it "Belastungslagerung," which is the title of his recently published monograph. It contains a description also of his mode of applying compression and massage by the mercury and the air colpeurynter. The influx of blood to the parts as the compression is removed is one of the chief advantages of this mode of treatment. It is unnecessary to discuss whether suggestion is an important factor in the excellent results obtained. Let us heal and help, he exclaims, we can argue later. When the colpeurynter is in place the compression is slowly applied and then rapidly removed, with a brief interval, this alternation of compression and its suspension acting as a massage of the parts. It is indicated for the sympathetic neuroses, for defective involution of the uterus, for chronic affections in the parametrium and adnexa, free from exudation, for myasthenia and defective tonicity of the wall of vagina or rectum, and also for the chronic muscular constipation of women.

116. **Lumbar Anesthesia in Gynecology.**—Müller's experience with 20 cases has been decidedly in favor of spinal cocainization or tropacocainization for gynecologic operations that do not require the peritoneum to be opened. The anesthesia was complete for operations of an hour's length or under. When the peritoneum was opened the anesthesia was less reliable, but a few whiffs of chloroform rendered it complete.

119. **Operative Sterilization.**—Küstner resected through the vagina 2 or 3 cm. of each tube and sutured the openings into the uterus, in the 2 cases reported. Both refused to allow laparotomy, and further pregnancies were urgently contraindicated. Both the women returned a year or so later in the second or third month of pregnancy. He concludes from his experience that it is necessary to resect the entire tube to prevent conception later. The opening into the uterus should be carefully sutured, with a plastic covering, if possible.

123. **Criminal Abortion.**—Puppe reviews his medicolegal experience as an expert in a number of cases.

128 **Treatment of Abortion.**—Langes describes his experience with 32 cases of simple or complicated abortion, in private practice. There was no temperature in any case. His treatment is digital evacuation in case of a single abortion, curettement for repeated abortion, and, in case of preceding endometritis, always curettement after three or four weeks. He has thus treated 32 cases in his practice without temperature in any case.

131. **Urogenital Fistula.**—Vertes summarizes Döderlein's experiences with 24 cases of urogenital fistula.

Münchener med. Wochenschrift, Munich.

135 (LII, No. 13.) Die Bekämpfung des Status epilepticus (attempts at prevention and treatment). K. Alt.
136 *Ueber den Pulsus alternans und pseudo-alternans. F. Volhard.
137 *Einbruch eines karzinomatösen Ovarial-Tumors in ein intramurales Fundus-Myom. A. Bauereisen.
138 Congenital Hyperplasia of Left Lung with Rudimentary Right Lung.—Angeborene Hyperplasie der einen Lunge, etc. E. v. Graff.
139 *Injuries of the Kidney.—Ueber Nierenverletzungen. Habs.
140 Connection Between Eye Findings and Symptoms in Vagus Domain.—Ueber den Zusammenhang von abnormen Erscheinungen im Auge mit Symptomen im Gebiete des Vagus. O. Rosenbach.
141 *Therapeutische Notizen zur Syphilis-Behandlung. A. Lieven.
142 *Noch eine Mitteilung uber Balsamum peruvianum. Unschuld.
143 Dosage of Roentgen Rays.—Ueber die Köhlersche Röntgenröhre mit Vorrichtung zur therapeutischen Dosierung der Röntgenstrahlen. B. Walter.

136. **Pulsus Alternans and Pseudo-Alternans.**—Volhard describes from the clinic of the late Professor Riegel 4 cases of alternating pulse, giving ten tracings of the findings at different periods. They corroborate his assertions that the anomaly is due to lengthening of the contraction by more sluggish contraction of the smaller systole, combined with high pressure in the aorta. He admits a true alternating action of the heart in the human subject, a rhythmic alternation of vigorous and feeble contractions of the auricles, as well as of the ventricles. There is no disturbance in the rhythm at the heart, only at the pulse; the smaller pulse wave arrives too late. This delay in the pulse wave is not due to any disturbance in conductibility, but to the lengthening of the time of contraction and to the slower propagation of the small wave in the artery. This lengthening in the time of contraction is caused by the more sluggish contraction of the smaller systole and to the high pressure in the aorta as mentioned above. By the appearance of an extra-systole in the alternate period, the alternation becomes so pronounced that the second pulse may become intermittent. There is only a single form of true *pulsus alternans*, that with a retarded smaller wave. If this appears in the normal interval or earlier, the case is one of pseudo-alternans, simulated by extra-systoles. The delaying of the pulse obliterates the regularity and simulates a disturbance in the rhythm in case of true alternans, while in the pseudo form the disturbance in the rhythm is obliterated and regularity is simulated. The idea used to prevail that pulsus bigeminus was a very serious sign, but the opinion is gaining ground more and more that it can be of a very harmless nature sometimes. Volhard's impression is that the nervous form always appears in the ventricular type. The rare auricular type seems to occur more on a muscular than on a nervous basis.

137. **Irruption of Cancerous Ovarian Tumor into a Myoma in Uterus.**—Bauereisen's case was specially interesting from the fact that the patient had presented glycosuria for three years—ever since the first symptoms of the tumor had been noted. After the removal of the diseased organs the sugar vanished from the urine. The glycosuria must have been due to pressure from the tumor on the pancreas, which prevented it from supplying its glycolytic ferment to the blood.

139. **Injuries of the Kidney.**—Five cases of kidney injuries are described and various diagnostic points are emphasized. One patient was a man of 38, who fell on his left side on a car coupler and experienced severe pain at once, radiating to the testicles, bladder and urethra. The kidney region was tender but no tumor was palpable. The urine was free from blood, pus, albumin and sugar. The abdominal muscles were rigid on the affected side, but not on the other. The absence of hematuria was remarkable; it is usually one of the leading symptoms of injury of the kidney. It can be differentiated from hematuria from injury of the bladder by the regularity of the blood stain in the urine. When the injury is in the bladder, the last portions of urine are generally stained more with blood than the first portions. Oliguria is the rule, and if the sound kidney suspends its activity, by reflex action, the case usually terminates fatally. Determination of the freezing point will show whether the reduction of the amount of urine is a true oliguria. The absence of oliguria in the case above described was likewise an interesting feature. When the patient was dismissed a month after the injury there were no symptoms except tenderness in the left lumbar region and slight stinging pains under the left costal arch.

141. **Iodid in Treatment of Syphilis.**—Spencer's formula for potassium iodid combines various tonics with the drug, but the medicine looks and tastes like ink. Lieven has modified the formula while retaining its essential ingredients. The resulting fluid is limpid, durable and of a pleasant flavor, and with it the tendency to iodism can be avoided.

℞.	Potassii iodid	℥i	30	
	Ferr. citr. ammon.	ʒi	4	
	Strychnin. nitratis	gr. 1/3		02
	Elæosaccharum menth. pip.	ʒi¼	5	
	Aquæ aurantii flor. q. s. ad	℥iv	120	

One teaspoonful equals 1 gm. of potassium iodid. Dose one teaspoonful in a large amount of water, not less than a pint. (The elæosacchara are from the German Pharmacopeia and are made by triturating any volatile oil with sugar in the proportion of one drop of the oil to 2 gm. of sugar. These should be freshly made when wanted.)

142. **Peruvian Balsam in Mal Perforans.**—Unschuld has had very gratifying results from the use of Peruvian balsam in treating mal perforans on diabetics. He applies it as a salve with lanolin in these cases.

Russkii Vratch, St. Petersburg.

Last indexed page 1491.

144 (III, No. 11.) Rubber Gloves in Military Surgery.—Primyenenie guttaperchevykh pertchatok v voennoi chirurgii. V. G. Zoege von Manteuffel.

145 *Unusual Foreign Body in Vagina.—Ryedkii slutchai dolgolyetnago prebyvaniya enorodnago tyela vo vlagalishtchye. V. N. Orloff.

146 *Compulsory Seclusion of Alcoholics in Asylums.—O prinyditelnom pomyeshenii alcoholikov v lyetchebnitzy. F. E. Rybakoff.

147 *Rol psychotherapii v dermatologii. K. S. Agadzhaniantz.

148 (No. 12.) Ob iskrivleniyakh sheiki bedrennoi kosti (coxa vara and valga). G. I. Turner.

149 Study of Blood Supply to Heart of Warm-Blooded Animals.—O mechanismye pitaniya (resp. krovosnabzheniya) serdtza teplokrovykh zhevotnykh. I. A. Tchuevski.

150 *Esophagotomy to Remove Foreign Bodies.—O naruzhnom syetchenii pishtchevoda kak neotlozhnoi operatzii pri udalenii inorodnykh tyel. P. A. Baratinski.

151 Advantages of Operating Under Direct Roentgen Light.—Ob operatziyakh pod neposredstvennoi provyerkoi lutchami Roentgen'a. A. I. Galebski.

152 (No. 13.) *Early Symptoms of Syringomyelia.—Slutchai syrinomyelii v natchalnykh stupenyakh eya razvitiya. M. I. Lifshitz.

153 (No. 15.) *Deceptive Course of 2 Cases of Gastric Cancer.—O skryto protekayushtchem rakye zheludka. A. P. Favitzki.

154 *Study of Action of Drugs on Isolated Kidneys.—O dyestvii yadov na sosudy izolirovannykh potchek. V. V. Zakusoff.

155 High Tension Electric Currents in Surgery.—K primenyeneiyu elek tokov (Tesla-d'Arsonval'ya) v oblasti chirurgii. P. M. Zhdanoff.

156 (Nos. 17-18.) Examination of Blood as Aid to Diagnosis and Treatment.—Znatchenie izslyedovaniya krovi dlya raspoznavaniya i lyetcheniya bolyeznei. K. I. Korovitzki.

157 Artificial Production of Microcephaly in Dogs.—Popytka iskusstvennago polutcheniya microcephalii u sobak. V. I. Danilevski.

158 Pharyngitis hemorrhagica. S. S. Preobrazhenski.

159 *Microbes of Bubonic Plague and Bacilli Pseudo-Tuberculosis Rodentium Pf.*—K morphologii i biologii mikroba, etc. S. I. Zlatagoroff.

160 Influence of Radium on Specific Hemolytic Serums.—O vliyanii radiya na spec. hemolytitcheskuyu syvorotku. P. P. Yagn.

161 Favorable Influence of Electric Phototherapy on Middle-Ear Affections.—O vliyanii kholodnago el. svyeta (lampotchek nakalivaniya), etc. O. S. Merrovitch.

162 Changes in Red Corpuscles as Early Sign of Lead Poisoning.—Izmyeneniya v krasnykh krovyanykh tyelakh kak rannii priznak svintzovago oprayleniya. A. I. Lure.

163 Necessity of Oxygen for Action of Hydrolytic Ferments.—Neobkhodim li kislorod dlya dyestviya hydrolititcheskikh brodil? N. A. Sakharoff.

145. **Croquet Ball Thirty Years in Vagina.**—Orloff relates the case of a ii-para who had introduced a croquet ball into her vagina to relieve the distress caused by prolapse of the uterus. The croquet ball answered the purpose of a pessary so that the prolapse caused her no further annoyance. The ball was left undisturbed for thirty years, when she applied for relief from a fetid discharge from the vagina, aged 60 at this time. The ball was broken up with Doyen forceps and removed in pieces without trouble.

146. **Incarceration of Alcoholics.**—Rybakoff urges that when a habitual drunkard shows signs of mental impairment or of moral depravity he should be placed in an asylum at once, without wasting time in the inebriates' homes.

147. **Importance of Psychotherapy in Dermatology.**—Three interesting cases are related to demonstrate the unmistakable influence of psychotherapy on cutaneous affections. It controls the physiologic functions of the skin, and with it the skin can be restored to normal when reduced sensibility invites a skin affection. Mental conditions have great influence over the nerves of the face and elsewhere, and mental conditions can be modified by psychotherapy. It influences the blood supply to the parts by its vasoconstricting or dilating action, and will prove a valuable aid in dermatology as an adjuvant to the usual measures for certain cases. One of the cases described was that of a woman of 20, hysteric, anemic, and suffering from intercostal neuralgia with periodically recurring herpes zoster. Suggestion in hypnosis for a few times put an end to the neuralgic and cutaneous disturbances. In another young woman there were no evidences of hysteria; but recurring eczema of the face was treated by psychotherapy with prompt cure. In a third case more than 20 seances were required before the rebellious eczema of the hands yielded to treatment. This patient was an elderly neurasthenic male.

150. **Esophagotomy for Removal of Foreign Bodies.**—Baratinski agrees with other writers in affirming that esophagotomy at once to remove a foreign body has had no mortality. The deaths that have followed esophagotomy were due to the injuries inflicted by attempts to extract the foreign body by other means. He reviews the literature on the subject; it embraces 248 cases and 36 of this number, or 14 per cent., were reported by Russian writers. In a personal case described, an insane young man had swallowed a stone weighing 24 gm. and measuring 8.25 cm. in circumference. It had lodged 23 cm. down, but was easily removed by external esophagotomy about eight hours afterward, without any bad effects.

152. **Early Symptoms of Syringomyelia.**—Lifshitz describes the case of a patient, 17 years old, who presented evidences of loss or reduction of sensibility to pain and heat in various regions, incipient atrophy of certain muscles of the hands, and left scoliosis. The course of the case confirmed the presumptive diagnosis of syringomyelia. He has observed left scoliosis also in 2 other cases as an early symptom of syringomyelia.

153. **Deceptive Course of Cancer of Stomach.**—Favitzki describes 2 cases of gastric cancer which presented the aspect of a dropsical affection. One was diagnosed as alcoholic cirrhosis of liver with ascites, but the further course of the case corrected this diagnosis to cancer of the stomach as the usual symptoms became superadded. In the second case, the diagnosis was aortic insufficiency, and concomitant cancer in the stomach was not suspected. The patients were men of 50 to 60. In one case except for loss of appetite and strength there were no signs to call attention to the stomach, no vomiting, dyspepsia nor pains. The tumor caused by the accumulation of ascitic fluid simulated a tumor of the liver in the second case, and in the third the gastric cancer developed with the clinical picture of a heart affection. The rapid course of the affection was suggestive; in the first case there was also associated lymphadenitis, and in the second, signs of cerebral extravasation, which further masked the true disease. These cases and similar ones which he cites from the literature establish that a cause of this nature may be surmised in certain cases of rapid formation of ascites accompanied by progressive emaciation in persons at the cancer age.

154. **Action of Drugs on Isolated Kidneys.**—The kidneys were kept "alive" in Locke's solution, and the action of digitalis, cocain, adrenalin, etc., was tested on them. The influence of some of these drugs on the vessels was marked, but this effect ceased after the organs had been kept in the incubator until they were really dead.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

BEASLEY'S BOOK OF PRESCRIPTIONS. Containing a Complete Set of Prescriptions. Illustrating the Employment of the *Materia Medica* in General Use; Comprising also Notes on the Pharmacology and Therapeutics of the Principal Drugs and the *Doses* of Their Preparations According to the Imperial and Metric Systems, with an Index of Diseases and Remedies. Rewritten by E. W. Lucas, F.I.C., F.C.S., with an Introduction by A. Latham, M.A., M.D., F.R.C.P. Eighth Edition. Cloth. Pp. 366. Price, $2.00 net. Philadelphia: P. Blakiston's Son & Co. 1905.

SURGICAL DIAGNOSIS. A Manual for Practitioners of Medicine and Surgery. By O. G. T. Kiliani, M.D. Illustrated by Fifty-nine Full-Page Plates and by Engravings in the Text. Cloth. Pp. 449. Price, $4.50. New York: William Wood & Co.

A NURSE'S GUIDE for the Operating Room. Second Edition. Enlarged and Revised. By N. Senn, M.D., Ph.D., LL.D., C.M. Cloth. Pp. 204. Price, $1.75 net. Chicago: W. T. Keener & Co.

FRAMES AND LENSES. A Practical Treatise for Optometrists. Illustrated. By R. M. Lockwood. Paper. Pp. 87. New York: Frederick Boger Publishing Co.

THE JOHN CRERAR LIBRARY. Tenth Annual Report for the Year 1904. Paper. Pp. 50. Chicago: Printed by Order of the Board of Directors. 1905.

PRACTICAL PROBLEMS OF DIET AND NUTRITION. By M. Einhorn, M.D. Cloth. Pp. 64. Price, 75c. New York: William Wood & Co.

SURFACE ANATOMY. By T. G. Moorhead, M.D., M.R.C.P.I. Cloth. Pp. 150. Price, $1.50. New York: William Wood & Co.

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Original Articles

OBSERVATIONS ON INFANT FEEDING, WITH REPORT OF CASES.[*]

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The question of substitute infant feeding is an ever important one. Much progress has been made in the subject during the last decade, and certain principles laid down and insisted on by Rotch are now well known and accepted, e. g., good breast milk is the ideal food for infants during their first year; if breast milk is impossible, feed accurate percentages of fat, proteids and sugar, feed individuals, not groups, etc. These principles need no further comment. They are universally accepted. Their application, however, is often difficult, and in practice we are constantly meeting with infants, the management of whose diet is puzzling and unsatisfactory.

The whole subject has now been crystallized into a study of the fats, sugars and proteids, and the effects of feeding definite amounts of these elements. Obviously, such study has been made possible only by the method of percentage feeding, which has been gradually evolved and brought to its present high state of perfection by Rotch. Many infants have now been fed along these lines, definite amounts of the above elements prescribed, and the results carefully noted. While our knowledge of fat indigestion, sugar indigestion and proteid indigestion has thus been greatly increased, it is still far from accurate, comparatively few cases having been reported in detail.

The basis of all infants' foods at present is cow's milk, and for a clear understanding of the subject we must remember the complex character of this article. Milk is not a simple food, it is a very complex food, combining in various amounts water, fat, proteids, sugar and mineral matter. It is manifestly as inaccurate and indefinite, therefore, to say "milk" whole or modified does not agree with the baby, as it would be to say "food" does not agree with the adult. Physicians who deal with digestive disturbances in the latter class of people, ask the patient how much meat he is taking, how much carbohydrates, how much alcohol, etc. Similarly with the baby, we ask how much fat he is getting, how much sugar, and how much proteid; in other words, we ask whether he is suffering from fat indigestion, sugar indigestion or proteid indigestion. As to treatment, we work at a great advantage in being able to grade these elements to a fraction of 1 per cent., and also in our absolute control of our patient.

FORMS OF INDIGESTION.

Now what are the symptoms of these various forms of indigestion? The inaccurate state of our knowledge in this direction has already been mentioned. In a general way, however, it may be summarized briefly as follows:

Fat Indigestion.—Disturbances from an excess of this element are more common than has been generally supposed. Too much fat is apt to cause vomiting soon after feeding, distaste for food, and diarrhea with loose, yellow or greenish-yellow stools containing an excess of fat often regarded as curds. Constipation, however, is frequent, and here the stools are hard and light colored. Holt, at the last meeting of the American Pediatric Society, reported several cases of fat indigestion in which some infants fed on a high per cent. of fat for a long time, were apparently perfectly well, but suddenly were attacked with severe nervous symptoms, convulsions, tetany, laryngismus stridulus, and enlarged liver. In other cases, the infants became very constipated and developed rickets, and eczema. Improvement followed in all on cutting the fat very low, to 2 per cent., and then increasing to about 3 per cent.

In the discussion, vomiting and constipation were especially emphasized as symptoms of fat indigestion.

Lack of fat in the diet results in slow gain or in actual loss of weight, generally in constipation, and, if long continued, in decided malnutrition, generally of the rhachitic variety. Rickets in its early stages is a species of fat starvation. Hence the frequency of this trouble among babies fed on the different proprietary foods, improperly modified milk, or a breast milk deficient in fat.

The apparent paradox of rickets arising from both a deficiency and an excess of fat in the diet is undoubtedly due to the fact that with an excess so much intestinal disturbance is produced, that only a small amount of fat is actually absorbed, while a large amount is found in the stools. Hence, the baby really has for purposes of nutrition a deficiency of the element.

Sugar Indigestion.—Disturbances from this element are less frequent than either of the other forms of indigestion, on account of the high sugar-digesting capacity of most infants. The maintenance of bodily heat is a most important matter for the well-being of infants; hence, nature provides for them in their natural food a comparatively large amount of sugar and a corresponding digestive power. Nevertheless, disturbances from an excess of this substance in the diet occasionally arise in infants with an apparently limited sugar-digesting capacity, such disturbances being characterized by tympanites, "wind colic," with severe pain and crying, relieved by the belching of wind and passage of wind by rectum. These infants are apt to have greenish, sour or acid bowel movements. Most of the proprietary foods contain an excess of sugar, and infants fed on them do gain in weight for a time, but are soft and flabby, are not strong and have little resisting power. The only well-defined results of a deficiency of sugar is failure to gain in weight.

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[*] Read at a meeting of the Chicago Medical Society.

Proteid Indigestion.—It is this element which gives infants the most trouble in digestion, and by far the great majority of cases of difficult feeding are cases of proteid indigestion, arising from an excess of this element. The symptoms are, perhaps, more sharply defined than are the symptoms of the other forms of indigestion. There are severe colic, foul smelling stools, with large curds and often mucus; the putrid character of the bowel movements is particularly characteristic of proteid decomposition and indigestion. Infants fed on a diet deficient in proteids are apt to be anemic, to gain slowly in weight, are soft and flabby, and later their digestive powers are decidedly impaired.

The difficulty which infants experience in digesting the proteids in cow's milk is probably due, not so much to the greater total amount of this element in cow's milk as compared with human milk, as to its different composition. Analysis shows the following differences between the proteids of the two milks:

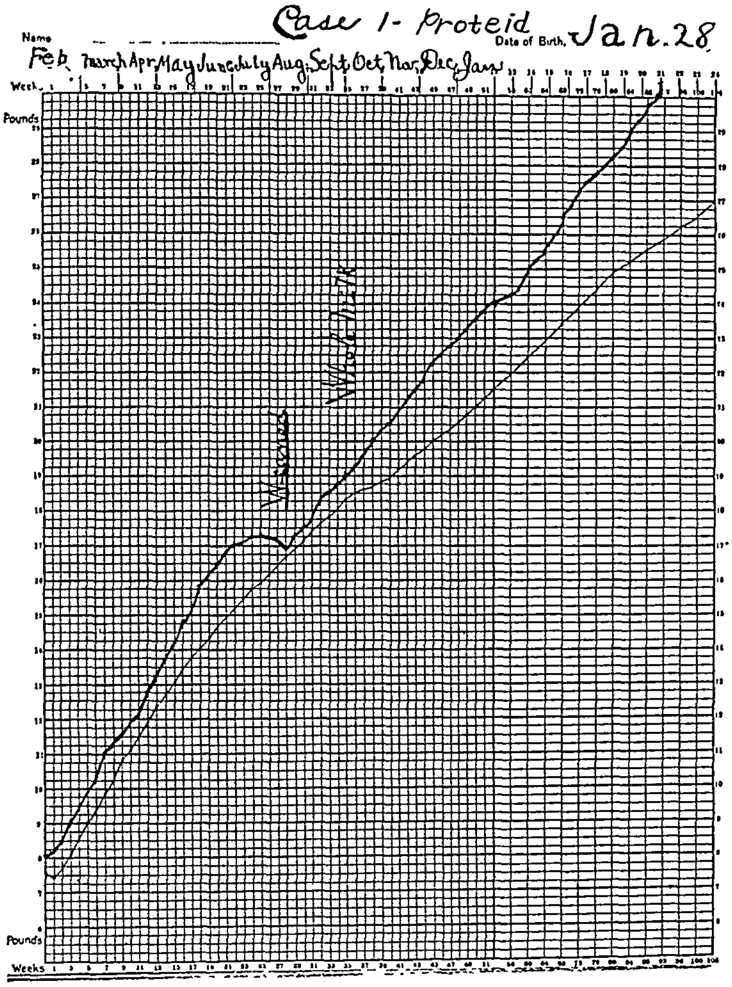

Chart 1.—Case 1. Note the steadily rapid gain in weight up to the fourth month, the gradual falling off and loss up to the sixth month, then the immediate and rapid gain on being weaned and put on modified milk. It may be taken as a standard chart.

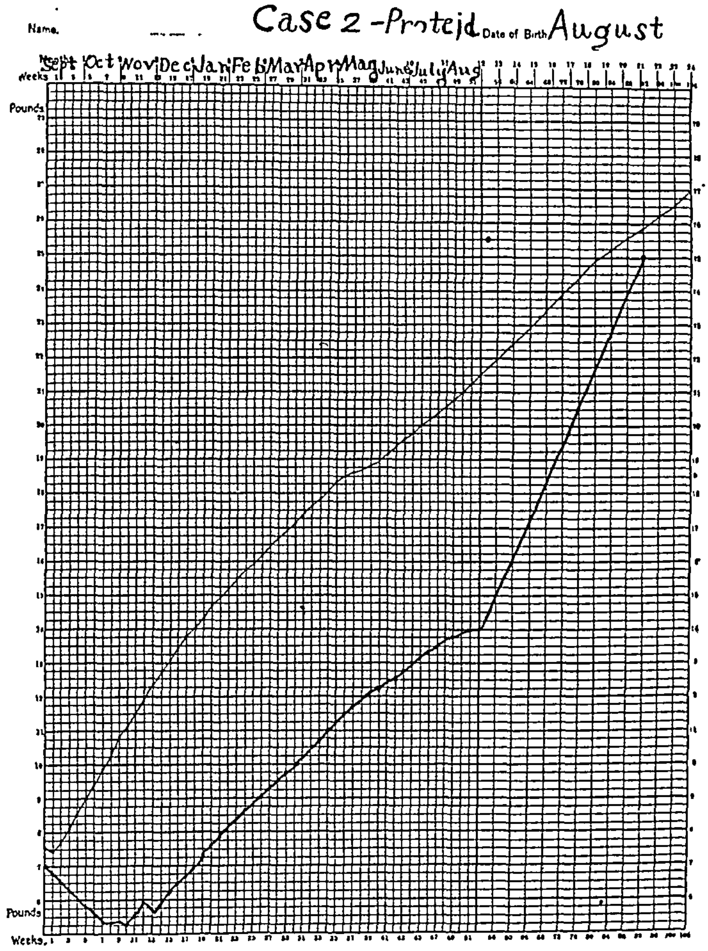

Chart 2.—Case 2. Note the steady loss in weight during the first seven weeks, due to faulty feeding, then the check in the loss of weight during the next four weeks, and finally the steady gain when she was put on first whey and ultimately whey-cream mixtures. It took two years, however, for this child to catch up to the normal weight.

	Cow (per cent.).	Human (per cent.).
Caseinogen	2.88	0.59
Lactalbumin	0.52	1.25
Total	3.41	1.84

The difference in the total proteids needs no comment; it is well understood. It is the relative proportion of the two substances, making up the total which is of importance. While in human milk the proportion of caseinogen to lactalbumin is about 1 to 2.5, in cow's milk, on the other hand, the proportion is about 5 to 1. In other words, the human infant is provided in its natural food with a relatively large amount of lactalbumin, but a relatively small amount of caseinogen. The former is easy to digest, the latter is difficult, and it is the presence of caseinogen in such relatively large amounts which causes so much trouble to infants fed on improperly modified cow's milk.

Further consideration shows why the problem is not solved by merely adding water to milk. When cow's milk is diluted with an equal amount of water, the usual household way practiced by mothers, all elements are cut in two, the total proteids being reduced to 2 per cent., the caseinogen to 1.4 per cent., and the lactalbumin to 0.26 per cent. Thus, while the total proteids are brought down within the possible limits of digestive power, the caseinogen is brought down to 1.4 per cent., when the infant's normal digestive power for this substance is only 0.59 per cent. Finally, by such dilution he receives only .25 per cent. of lactalbumin, or about 1/5 as much as he is capable of assimilating, and to this extent he is deprived of a material necessary for his normal nutrition.

Some method other than the addition of water must be practiced in the management of this troublesome element. It must be either cut down to a very small amount or eliminated from the diet altogether. In extremely severe cases of mal-nutrition, at the beginning of treatment it must be eliminated altogether. At the same time, if possible, the lactalbumin must be retained. Now this two-fold object, the elimination of caseinogen and the retention of lactalbumin is attained by simply feeding whey.

The analysis of whey shows the following:

	Per cent.
Lactalbumin	0.8- 1.00
Fat	.32
Sugar	4.79
Salts	0.65
Water	93.38

We have here, then, an article of diet free from caseinogen, yet containing nearly the same amount of lactalbumin found in breast milk, a low percentage of sugar, and a small amount of fat. There are few infants who can not digest this simple article. They may be started on whey, kept on it for a time, and then, depending on their progress, the fat and sugar may be increased by the addition of cream and milk sugar in definite amounts; caseinogen in the form of fat-free milk may be added, and thus the infant may be gradually worked up to a sufficiently nutritious and easily digested food.

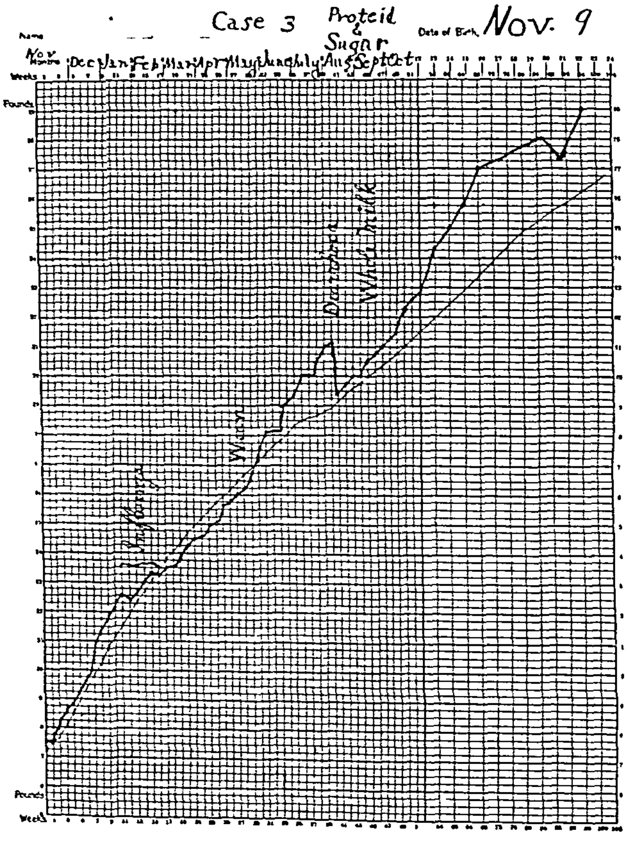

Chart 3.—Case 3 Note the steady gain for the first three months, then the slower rate of gain due to an attack of influenza, the more rapid gain on being weaned, the sharp drop in weight during an attack of summer diarrhea, with, however, a quick recovery and rapid strides during the second year. During his first year he had trouble, first with proteids and later with sugar.

The value of whey in the feeding of infants has been known for a long time, but the true reason for its value was first pointed out by Westcott, and was the natural outgrowth of his study of Rotch's percentage method of feeding. His work has resulted in an intelligent and accurate method of handling the indigestible proteids of cow's milk. We are now enabled to "split" the total proteids, feed lactalbumin and caseinogen in definite percentages and in the proportion found in breast-milk, and thus to maintain a proper amount of total proteids. This can be carried out by home modification, but is done more accurately at the laboratory. It marks a distinct and important step in advance in methods of infant feeding.

The management of fats and of sugar gives much less trouble than that of proteids. They can be readily increased or diminished by varying the amounts of cream and sugar.

The symptoms described above and the principles of management involved can best be illustrated by reports of cases.

Case 1.—This boy is an example of a vigorous child who got a good start on breast-milk. The chart shows the satisfactory gain in weight during his first four months, then the lessening rate of increase, the standing still for three weeks, and, finally, the actually steady loss for three weeks during his seventh month. At this time, though it was midsummer, it seemed wiser to wean him before serious nutritional troubles developed, as all attempts to improve the breast-milk during the preceding two months had failed. The baby was, therefore, given daily two bottles containing 6 ounces each of modified milk; fat, 3 per cent.; sugar, 6 per cent.; proteids, 1.25 per cent. He at once began to gain, but had severe colic and curds in the stools. Evidently 1.25 per cent. of proteids was too high for him. They were reduced to 0.75, which agreed with him perfectly, and on this he was kept for ten days, when they were increased to 1 per cent., the number of bottles being rapidly increased to six daily. The proteids were gradually increased 0.25 per cent. at a time until at eight months he was taking whole milk. The fats and sugars he bore well, the former being started at 3 per cent. and gradually raised within a month to 4 per cent., the latter starting at 6 per cent. and raised to the maximum of 7 per cent. within three days. Aside from the slight proteid-indigestion of the first three days he did well, rounding out his year at 24 pounds. The case was a simple one, presented no difficulties in its management, and is reported merely as a normal or "standard" case (Chart 1).

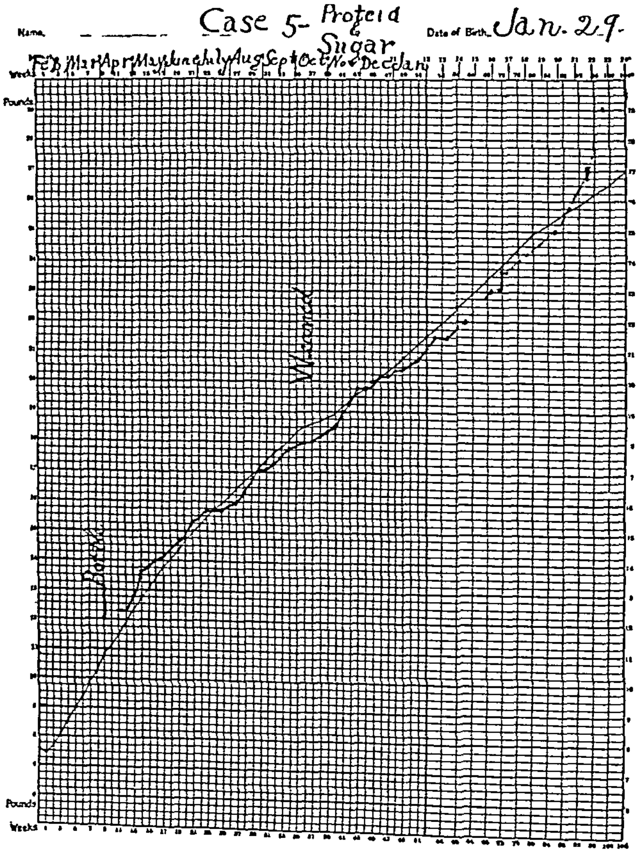

Chart 4.—Case 5. The curve runs closely parallel to that of the average, but below it, owing to the limited proteid and sugar-digesting capacity of the infant. This was a vigorous child and her weight curve ought to have been above the average.

Case 2.—This girl, referred to me by Dr. R. H. Babcock, was a difficult case. She was healthy at birth, weighing seven pounds, was nursed for three weeks, then fed for three weeks more on mixtures of either milk and water, or milk and barley water. During all this time she had much colic, foul, green, curdy movements, slept but little, was restless and fretful and lost steadily in weight.

Examination.—I first saw her when she was six weeks old, and her condition then was pitiable, indeed. The emaciation was extreme, the color bluish and livid, the face had a constant expression of pain and discomfort, the abdomen was distended and tympanitic, and the extremities cold—a typical picture of severe infantile atrophy. The blood showed Hb. 70 per cent., erythrocytes 4,384,000, leucocytes 6,000. The weight was 5 pounds six ounces.

TABLE I—CASE 2.

Date.	Age.	Feeding.	Result.	Weight. lbs. oz.
Oct. 2..	6 wks.	F. 2.5%, S. 5.5%, P. 0.5%...........	Hungry, dejecta green, curds, wind.	5— 6
Oct. 5..	....	F. 3, S. 5.5, P. 0.5, 3 oz...............	Same......	5— 4
Oct. 7..	....	F. 3, S. 4.5, P. 0.5, 3 oz...............	Dejecta yellow, wind.	
Oct. 10.	7 wks.	F. 3, S. 3.5, P. 0.5, 3 oz.....	Better, less wind.	5— 5
Oct. 13.	....	F. 3, S. 3.5, P. 0.5, 3 oz...............	Better, but more wind.	
Oct. 14	....	F. 3, S. 2.5, P. 0.5, 3 oz...............	Hungry, less wind, curds.	5— 5
Oct. 17.	8 wks.	F. 3, S. 2.5, P. 0.75, 3 oz.............	Occasional vomiting, little gas.	5— 6
Oct. 19.	....	F. 2.5, S. 2.5, P. 0.75, 3 oz..........	Much better, hungry.	
Oct. 23.	9 wks.	F. 2.5, S. 2.5, P. 0.75, 4 oz...	Colic—green stools.	5— 4
Oct 27.	....	F. 2.5, S. 2.5, P. 0.75, 4 oz. Barley water, 1 dram.	Colic—green stools.	5— 4
Oct. 29.	10 wks.	*F. 0.3, S. 4. L. 0.8. (Whey, 2 oz. Lime water, ½ oz.)	Better.	
Nov. 3.	....	F. 0.8, S. 4.5. Total prot. 1.02 { L. .88 C. .14 (Whey, 17 oz. Cream, 1 oz.)	Doing well	5—15
Nov. 9.	12 wks.	....	Dejecta normal.	5—10½
Nov. 13	....	F. 1.7, S. 4.6. Total prot. 1.27 { L. .97 C. .3 (Whey, 17 oz. Cream, 2 oz.)	Hungry.	
Nov. 16	13 wks.	....	Hungry, dejecta normal.	6— 0
Nov. 23	14 wks.	F. 2.8, S. 4.7. Total prot. 1.35 { L. .85 C. .53 (Whey, 17 oz. Cream, 3 oz.)		
Nov. 28	....	....	Little vomiting, but generally better.	6— 6
Dec. 2.	15 wks.	F. 1.7, S. 4.6. Total prot. 1.27 { L. .97 C. .3 (Whey, 17 oz. Cream, 2 oz.)	Doing well	6— 7½
Dec. 7.	16 wks.	....	....	6— 9½
Dec. 10	....	....	Some curds.	6—12
Dec. 16	17 wks.	F. 2.6, S. 5.5. Total prot. 1.00 { L. .83 C. .17 (Whey, 25½ oz. Cream, 4½ oz. Milk-sugar, 2 teaspoonsful.)	Dejecta numerous but normal.	6—15
Dec. 28	19 wks.	F. 2.8, S. 5.5. Total prot. 1.3 { L. .8 C. .5 (Whey, 26 oz. Cream, 5½ oz. Milk-sugar, 2 teaspoonsful.)	....	7— 9½
Jan.....	....	....	....	7—14½
Jan. 7..	....	Whey gradually dropped, milk substituted.	Did well...	8— 0
June 10	10 mo..	F. 4, S. 7, P. 3.3........................	....	12— 0
Oct. 1..	13 mo..	Whole milk...........................	....	15— 0

*Mr. James Cheeseman of The Walker-Gordon Laboratory has kindly verified these formulas.

F., fat; P., proteid; S., sugar; C., caseinogen; L., lactalbumin.

Obviously, the digestive powers in this infant had suffered equally with the rest of the body, and the indications in the management of the case were to feed her small amounts of the three main elements, to begin with low percentages of fat, sugar and proteids, adapted to her extremely limited digestive powers. The management of the feeding, the results of the various formulæ tried, as manifested by the bowel movements and weight, are shown in the accompanying table and weight chart. For four weeks I tried to prepare a modification which would agree with the baby, but unsuccessfully. The downward progress of the weight was checked at once it is true, only two ounces being lost after I took charge, but beyond this no improvement took place. She was then put on a whey mixture, with immediate and marked improvement. Pure whey was fed for nine days, then cream in gradually increasing amounts was added and finally milk sugar. The whey modifications were continued for about three months, milk was then gradually substituted for the whey, and she finally reached whole milk at the age of 13 months.

The immediate effect of feeding whey was striking. While she had stood still at five pounds four ounces for the four weeks preceding, during the first week of her whey feeding she gained eleven ounces. She then lost a little for a week, after which her upward progress was steady, though not rapid. At one year she weighed only fourteen pounds, seven pounds below the average. During her second year she took a sudden start and shot up rapidly, at 21 months weighing twenty-five pounds, less than a pound below normal, and was the picture of health (Chart 2).

As with most cases of severe malnutrition, it was the cow proteids, with its high percentage of caseinogen, that gave this infant the most trouble. In giving her 0.5 per cent. of this element I gave her lactalbumin 0.08 and caseinogen 0.42 when her capacity for caseinogen was practically nil. By giving her the whey and thus cutting out the caseinogen we removed the greatest obstacle to her progress and at the same time gave her the much-needed lactalbumin. The infant's capacity for digesting sugar did not suffer so much as her power of digesting proteids. The sugar was started at 5.5 per cent., but gradually cut to 2.5 per cent. on account of the formation of gas. My reasoning, however, was obviously incorrect. The gas was evidently due to the proteids and not to the sugar. She had much gas continuously as long as total proteids were fed, even with 2.5 per cent. sugar, whereas when we began to use whey she had no gas, even with the 4.8 per cent. of

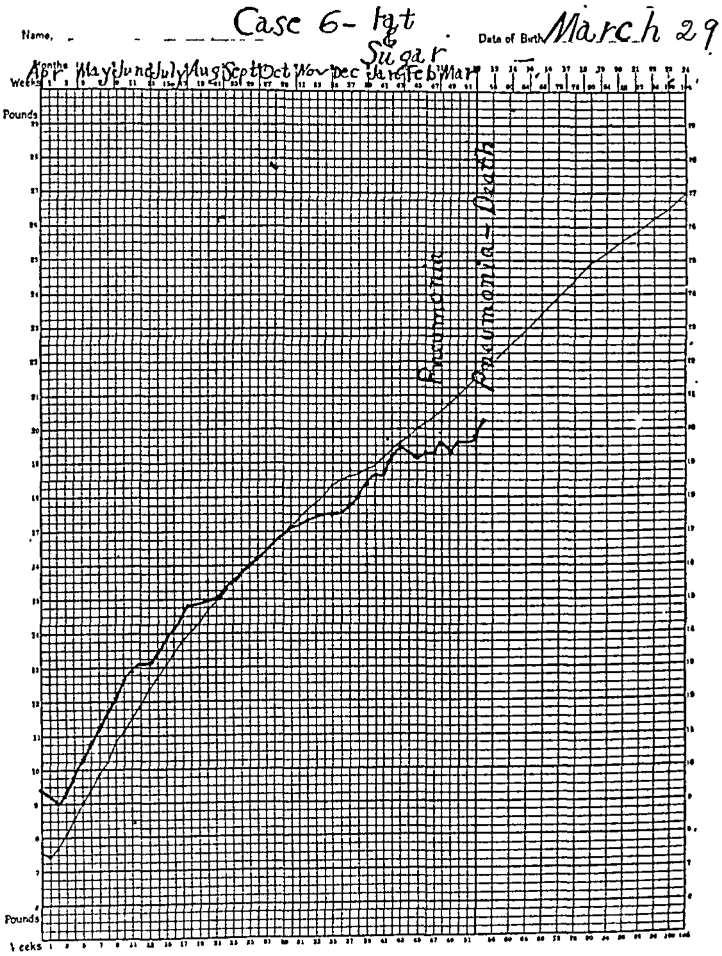

Chart 5.—Case 6. Note the steady gain up to the fourth month, then the slower rate of gain owing to limited fat and sugar-digesting power. Death at one year from pneumonia.

sugar contained in whey. This observation emphasizes the opinion that an excessive amount of gas can not always be attributed to sugar alone.

The study of this case taught me much—most of all that it is a mistake to attempt to feed caseinogen too long in our anxiety to give the infant a strongly nutritious food. We shall make more rapid progress by recognizing at the outset that we are asking the impossible in expecting such an infant to digest and to assimilate caseinogen. Rather feed a child at first with food adapted to such powers as it has, and thus help it gradually to develop greater powers for the handling of more difficult foods to be fed later in development.

Case 3.—This boy, a younger brother of the child in Case 1, was breast-fed for six months. He gained rapidly until about his third month, when he was attacked with a diffuse influenzal bronchitis, as a result of which he at first lost weight, then gained, but more slowly, his curve dropping below the average. In May, when he was about 6 months old, I started to wean him, putting him on a mixture prepared at home and averaging F. 2, S. 5, P. 0.75. He was started on these low percentages, as he had been having slight digestive disturbance. During the next few weeks he had some proteid indigestion, characterized by rather foul movements with curds, so that at ten months he could take only 2 per cent. of this element. He also suffered at times with much gas, promptly relieved by cutting the sugar from 6 to 3 per cent. He was kept on this low sugar percentage for two weeks, during which time his weight stood at 18 pounds 2 ounces, though the fat and proteids were 4 and 2.5 per cent., respectively. On increasing the sugar, he again gained steadily until August, when he had a sharp fermental diarrhea and lost weight for a week. His subsequent record was uneventful and he ended his year at 22 pounds 12 ounces in excellent condition (Chart 3).

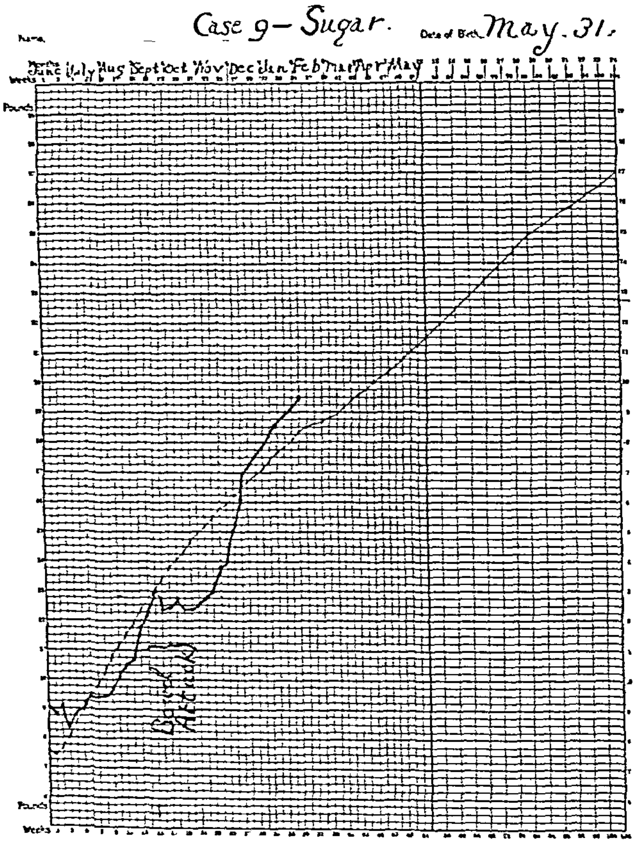

Chart 6.—Case 9. Note the loss of weight during the first three weeks on a poor breast milk, then the slow gain on malted milk or modified milk with too much sugar, the loss in weight from the fifteenth to the twentieth week, due to constant bowel trouble, and finally, beginning with the twenty-first week, the steady rapid gain when fed modified milk containing a small amount of sugar.

The slow progress of this case from January to April (third to six month) I attributed to the attack of influenza in January, which weakened the baby considerably. The symptoms of proteid indigestion, curds and foul movements and of sugar indigestion, chiefly gas, were quite sharply defined in this infant and were promptly relieved by reducing the amount of the offending element.

Case 4.—This girl, weaned at two months, was fed on modified milk and beef juice until six months, when she came into my care, at which time she weighed 13 pounds 3 ounces. This was a difficult case; the child gained only slowly in weight, owing mainly to her low sugar digesting capacity.

I started this baby on F. 2.5, P. 1.7, S. 6; and these figures were increased in a week to 3.5, 2.5 and 6.5, respectively. She bore the fats and proteids well, but had an excessive amount of gas due to the sugar. This element was, therefore, reduced, but not until it was reduced to 3.5 per cent. was she free from wind colic. The sugar was subsequently increased, but she never was able to take more than 5 per cent. She finally reached whole milk at 11 months.

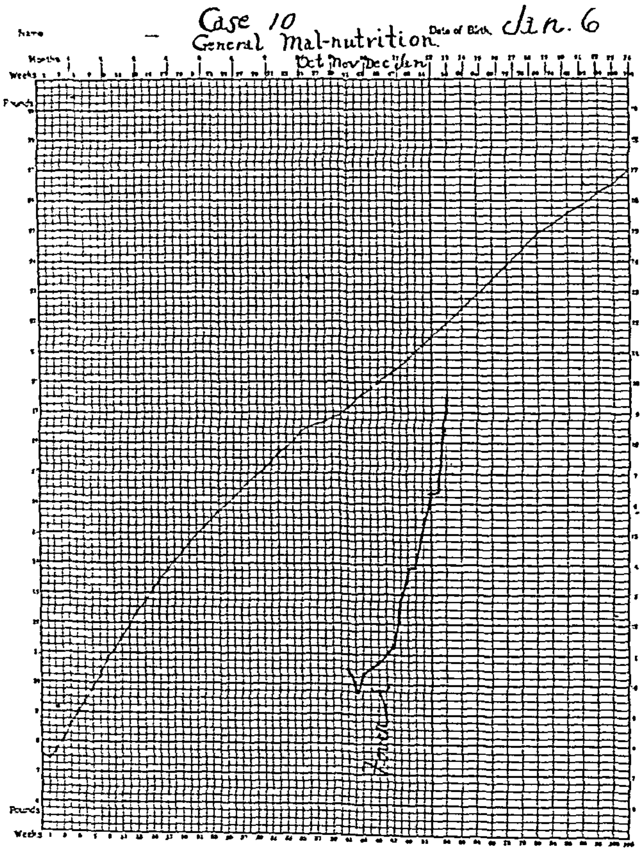

Chart 7.—Case 10. Note the extremely low weight at his tenth month, the loss during the first week of starvation treatment, the the steady upward march when put, first on whey, then whey-cream mixtures.

Her weight chart ran exactly parallel to the average curve, but three pounds lower. She is naturally a small child, but her light weight was undoubtedly due in part to the small amount of sugar which she was able to assimilate. She gained more rapidly during her second year, however; at 16 months she weighed 22 pounds and was in excellent physical condition.

Case 5.—This girl, a vigorous child, is an example of mixed feeding. At two months the mother, who had had much gastrointestinal trouble since the birth of the child, feared her milk was giving out, and certainly on an average of once a day there was no milk in the breasts at feeding time. Analysis of the milk showed fat 3.6 per cent., sugar 6.91 per cent., albumin 0.84 per cent., ash. 0.12 per cent., water 88.53 per cent. The baby was given daily one three-ounce bottle of modified milk, F. 4, S. 7, P. 0.75. The infant was such a vigorous one that I felt sure she could take care of the maximum amount of fat and sugar. The proteids I made a little lower than those in the breast milk. She bore this element well, and in three weeks it had been gradually increased to 1.5 per cent., the fat and sugar being kept at 4 and 7 per cent., respectively. The number and the quantity of artificial feedings were gradually increased until at eight and one-half months she was wholly weaned and was taking six feedings of eight ounces each, the formula being F. 4, S. 6.1, P. 0.5. Repeated attempts had been made to raise the proteids to 1.7 per cent., but each time colic and curds had followed, and at the time of weaning she had been on 1.5 per cent. for several weeks. A short time before weaning she had much gas and the sugar was reduced to 6 per cent. without any apparent improvement, then to 5.5 per cent., immediately after which she was perfectly comfortable.

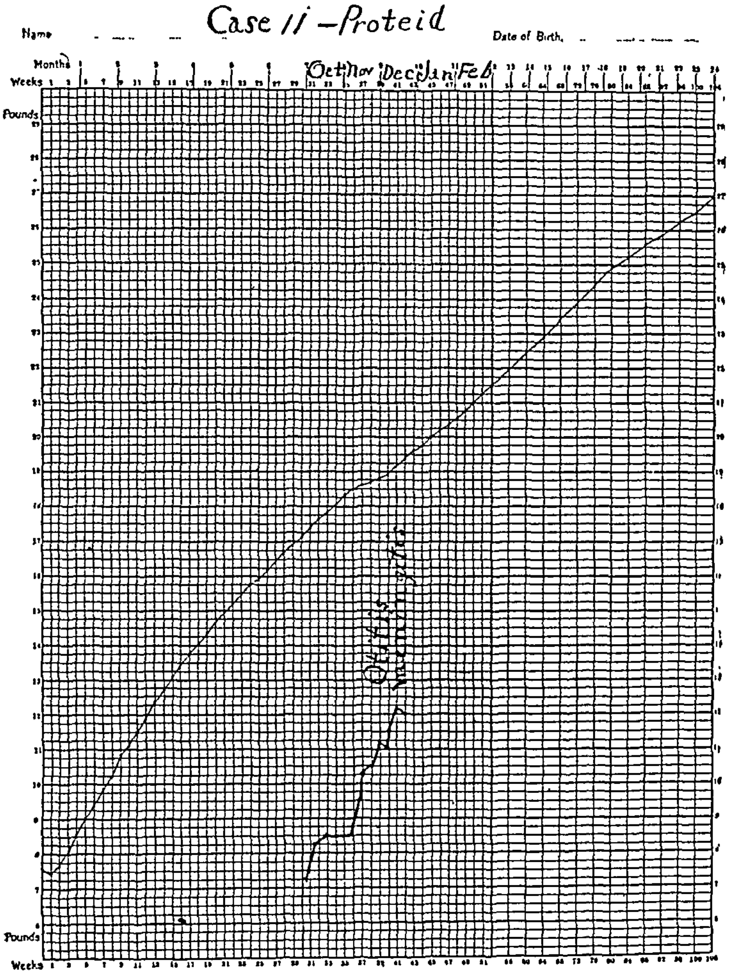

Chart 8.—Case 11. Note the extreme degree of malnutrition, manifested by a weight of 7 pounds at 7 months, the slow gain during the subsequent five weeks, due to his inability to digest caseinogen, then the steady and rapid gain on whey or whey-cream mixtures. Death at ten months from meningitis.

From the ninth to the eleventh month this baby digested her food well and gained in weight, the proteids having been increased to 2.5 per cent. At the eleventh month, however, she again was troubled with gas, and the sugar was cut to 5 per cent., again with good effect immediately. She finally reached whole milk at 12 months. During the first half of her second year she was well, but gained only slowly in weight. At her nineteenth month, however, she took a start and gained rapidly, weighing 29 pounds at 23 months (Chart 4).

This infant's record after her fourth month was only moderately satisfactory. Strong and vigorous at birth with a weight of nine pounds, she should have kept up her pace, instead of which her weight curve gradually drops below the line, runs parallel to it for over a year and does not recross it until she is 20 months old. The record is the more to be criticized, as the artificial feeding was supplemented by breast milk up to her ninth month; for it is well known that modified cow's milk is better borne usually if there are one or two breast feedings during the twenty-four hours. The infant's failure to gain more rapidly in weight was undoubtedly due to her difficulty in digesting, first, the proteids and, later, the sugars. Why such a vigorous child should have been weak in this direction I have no idea. It may have been a manifestation of a family idiosyncrasy. The infant's mother and three older sisters have never been able to eat even a moderate amount of sugar, and a younger sister (Case 6) also had digestive trouble of a similar nature. I think this infant would have been better on a whey-cream mixture, but at that time, 1899, the advantage of splitting cow proteids, thereby feeding a high percentage of whey-proteids and a low amount of caseinogen, had not been pointed out.

Case 6.—This girl was a younger sister of the child in Case 5. She was a vigorous child at birth and did well on the breast during the first three months, when she was weaned and put on F. 3, S. 4, P. 1.25 and continued to thrive. But intolerance of fat and sugar soon developed and she never got above 3 per cent. of fat and 4 per cent. of sugar. Every attempt to increase either of these elements resulted disastrously. When the fat was raised above 3 per cent. she vomited repeatedly and several times had an urticarial eruption. Increase in sugar above 4 per cent. invariably resulted in wind colic. Most of the time she was taking only 3 to 3.5 per cent. At 11 months she had pneumonia, a mixed infection of the *pneumococcus and influenza bacillus, the* left lower lobe being affected. She recovered from this, only to be attacked at 13 months by the pneumococcus alone, again in the left lower lobe, and died after ten days. How much part her digestive troubles and lack of proper development played in the final result it is impossible to say, but they probably exerted some unfavorable influence (Chart 5).

This infant's case was the most marked one of fat and sugar intolerance in the series reported. The presence of an urticarial eruption immediately on raising the fat above 3 per cent. occurred repeatedly, too often to be merely a coincidence, and is comparable to a similar phenomenon in certain adults, whenever they eat strawberries, for example. A sugar digesting capacity of from only 3.5 to 4 per cent. is unusual and is particularly interesting in view of the family history.

Case 7.—This girl is an example of the superiority of wet-nursing to modified cow's milk. She was a small baby at birth, weighing only 6¼ pounds. The mother had practically no breast milk from the start. I first saw her at 12 days, when she was on a mixture prepared by the nurse and analyzing about F. 3.25, S. 4, P. 0.75. She had lost two ounces since birth, had had much colic and slept poorly. I put her on F. 2.50, S. 6, P. 0.75. During the next three weeks the fats were increased to 3 per cent., the sugar kept constant, and the proteids cut to 0.25 per cent. The baby did poorly, however, cried much, had green and yellowish-green movements, and, though she did not lose weight, she made no gain. At five weeks one-ounce feedings of whey were substituted, t. i. d., for the 3-6-0.25 mixture, and she was given one minim of dilute hydrochloric acid after each of the latter feedings. She at once seemed more comfortable, had better bowel movements and began to gain slowly in weight. At the end of ten days she was put on F. 3, S. 6, whey proteids 0.8.

On this mixture the baby had much colic and gas, but gained slowly. Her general condition, however, was poor, the extremities blue and cold, her weight at nine weeks was 6 pounds 15 ounces, a gain of only eleven ounces since birth. Substitute feedings with various modifications of cow's milk had been tried, with most unsatisfactory results. It was, therefore, decided to try a wet-nurse. The baby at once became more satisfied and comfortable and began to gain more rapidly in weight. During the next three months four different wet-nurses were used. Breast feeding was kept up until the tenth month, but was supplemented by the bottle from the fourth month. She did not reach whole milk until she was 13 months old.

This record was a poor one. It was a mistake to try cow's milk so long. Undoubtedly better progress would have been made had I resorted to wet-nursing earlier. But even with breast feeding, progress was slow. The best results were obtained on mixed feeding—breast and modified cow's milk. In the five weeks during which this method was carried out under my direct supervision the baby gained 2½ pounds, an average of half a pound a week. At the end of this time, in July, the family left the city and did not return until October. No record of the weight was kept during these three months, but it must have been steadily rapid, a striking example of the beneficial results of country life. Late in October the baby again left the city and was in New York two months, gaining slowly. On her return she was weaned and put on modified milk and gained better, though the proteids had to be increased slowly. Although much below weight at 14 months, she was in very good condition and seemed well, happy and contented.

Case 8.—This girl did only fairly well on the breast for five months, when she was weaned and put on a F. 3, S. 6, P. 0.5 mixture. She at once began to gain rapidly, even through an attack of measles immediately after weaning. Her formula was strengthened at intervals and she reached whole milk at one year. The interesting feature of the case is the rapidity with which the infant gained when she was taken off a poor breast milk and put on modified cow's milk.

Case 9.—This boy had a limited sugar-digesting capacity. He was weaned at three months, put first on malted milk and then on modified milk. He had much bowel trouble, with curds, mucus and wind colic, the last symptom apparently due to sugar. I first saw this child when he was twenty weeks old, after he had been losing weight for five weeks. His general condition, however, was still excellent. His only weakness seemed to be an intolerance of sugar. He was, therefore, put on a F. 3, S. 2.5, P. 1 mixture. He began to gain immediately and had practically no further trouble. When I first saw him he was 2½ pounds below average. He "crossed the line" in seven weeks. His formula was gradually strengthened, but he never got beyond 3 per cent. of sugar. Every attempt to go beyond this produced much colic. Now, at 8 months, he is getting F. 3.5, S. 3, P. 1.75, weighs 19½ pounds and is in excellent condition. His record shows how well an infant may thrive even on a small amount of sugar (Chart 6).

Case 10.—This boy, aged 9 months, was brought to me October 17 from Kentucky, in a state of extreme malnutrition. He weighed six pounds at birth, was breast-fed for five months, then all foods were tried, chiefly barley-water and milk. He had never done well and for two months had had numerous foul, green stools containing mucus and curds.

Physical examination showed marked emaciation, slight beading of ribs, distended abdomen, small inguinal hernia (R). His weight at this time was 10 pounds 8 ounces.

Blood:

Erythrocytes	5,320,000
Leucocytes	16,000
	Per cent.
Small mononuclear	61
Large mononuclear	2
Polynuclear	34
Eosinophiles	3

As a preliminary treatment, in order to empty and to disinfect the bowels, he was put for a few days on a diet of arrowroot and rice water and given one-quarter-grain doses of calomel and rectal enemata. He was then put on whey, to which subsequently cream and milk sugar were added in gradually increasing amounts, and finally fat free milk. His progress is best indicated by his weight chart. He lost twelve ounces during his first week of treatment, as was expected. Then he gained steadily and rapidly during the subsequent two months of treatment, at the end of which time he returned to his home in excellent condition, weight 15 pounds 6 ounces. At the beginning of treatment he was nine pounds below average, at the end five pounds below. At thirteen months he weighed 19 pounds (Chart 7).

Case 11.—This boy, aged 8 months, had been fed on various foods and on improperly modified cow's milk. He had had repeatedly vomiting, diarrhea, green curds, elevated temperature, general malaise. Examination showed much emaciation and pallor. Weight 7¼ pounds.

For a month he had been fed alternately with whey and the "materna," being started on Formula 1 of the latter, F. 2.5, S. 5, P. 0.6. While on this formula he had foul, green movements with curds, much colic, occasional vomiting. Whey was tried for several days with improvement. He was then put back on the "materna," with the same bad result. Whey was tried again, and again with improvement. These experiments were repeated many times, and always with the same result. He invariably had trouble while on the "materna," due to caseinogen; he invariably improved when put on whey.

I took charge of him at eight months with his weight at 8½ pounds. He was started on the following mixture: Whey, 2 ounces; cream, 6 drams. Subsequently this was gradually increased. Sugar was added and in about two months he was taking the following mixture: F., 4 per cent.; sugar, 7 per cent.; P. O., 3 per cent. He then began to run a temperature of obscure origin, which was subsequently explained by the development of double otitis media. Then pneumonia and meningitis developed in the course of three days and the child died at ten months. The weight a few days before death was 12 pounds (Chart 8).

As far as his feeding was concerned, this child did very well, as shown by the weight chart; and had it not been for the development of his acute conditions there was every prospect of his permanent improvement.

These cases give a fair idea of the difficulties encountered in every-day practice among babies. Cases 7, 10 and 12 were cases of proteid indigestion, Cases 4 and 9 of sugar indigestion and Case 6 of mixed fat and sugar indigestion. The treatment appropriate to each has been indicated in the respective cases. It is to be noted that it is largely dietary.

SUMMARY.

Cases of difficult feeding in infancy are cases of (a) fat indigestion, (b) sugar indigestion, (c) proteid indigestion. Each one of these varieties may exist alone or in combination with the others. The most frequent form is proteid indigestion, but cases of fat indigestion are also common.

Each individual infant must be a law unto himself. Babies can not be fed by rule of thumb. The form of indigestion present, if possible, must be determined and appropriate treatment be applied. The treatment is almost exclusively dietary. The fats and sugar can be regulated by varying the amounts of cream and sugar.

The composition of cow proteid, high caseinogen and low lactalbumin, must be remembered in the management of proteid cases. The caseinogen must often be cut to a low point or even eliminated altogether; lactalbumin must be retained in the food; this twofold object is attained by feeding whey.

Increase in quality and quantity of the food must be made gradually.

It is desirable that many artificially fed babies should be carefully studied, the symptoms of different forms of indigestion noted and the data published.

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ECONOMICS OF MEDICAL ORGANIZATION.

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The value of medical organization should be repeatedly emphasized, for it requires much repetition of its advantages to secure full co-operation. Medical men are prone to regard each other as rivals, not as colleagues, and this attitude must be abandoned before effective organization can be accomplished. A most harmful delusion is that best results follow independent or individual action; as a consequence of this, fluctuating personal views on medical treatment prevail, influencing the laity who, having apparently exhausted the resources of one man, reject him and select another. Each time a patient makes such a change, while being treated for some persistent disorder, less is expected, hope shrinks, and confidence dies, till at last the educated physician, equipped with knowledge and experience, is rejected and "mystery mongers" are consulted. These pretenders boast much and claim omniscience, and that most potent of remedies, suggestion, replaces skill and judgment. Again, many charlatans possess undeniable skill in certain narrow lines, and far too often good results follow their optimistic efforts.

The public naturally loses confidence in the use of drugs when each physician consulted apparently experiments with different ones, securing only questionable effects. Some physicians do worse, consciously or unconsciously; they belittle their predecessors, giving small evidence of consistency in their reasoning or in their methods. For these and for other reasons that inestimable quality, so beneficial to the individual and communities, the powerful influence of a scientific personality, has steadily waned. This is shown occasionally in the bearing of our patients, many of whom are our personal friends, yet when they come to us for professional aid they exhibit a flippancy, a conscious reservation, a veiled threat to seek elsewhere if we fail, which, to say the least, is humiliating. There was a time when the implied menace took another form, failing regular medication recourse would be had to the promises of the then new claims of homeopathy; now, however, owing to the enlightenment from European sources, where homeopathy has almost ceased to exist, many intelligent people in this country know that there is little difference to be expected, except perhaps in the rosiness of the mystery-colored vaticinations. Nowadays new brands of optimists ruffle in our midst, liberal of auguries. Their watchword is usually "no drugs"; they advocate ecstatic mental attitudes, readjustments of the bony framework, manipulations, the laying on of hands, *et id omne genus.*

This fashion of mind, at least in its momentousness, is largely due to faults in ourselves. We do not consistently and wholesomely supplement the endeavors of each other. We fail in sustaining a much-needed optimism concerning our monumental patient. painstaking and scientific researches. We testify too little to the value of the life-sacrificing, self-abnegating labors of the humbler, as well of the brilliant. of our brothers in arms, who unflinchingly watch and combat the approaches of disease and death. Instead of exerting co-operative action, early and late, forcing all our efforts toward the unending war against the great destroyer. by lack of vigilance and oneness of purpose we permit the petty things of life to dissociate, to disintegrate and to turn aside our blows from the common enemy. We thus fail to exercise the effect which would be ours if we acted as a unit. At the bedside our individual duty may be done according to our lights, but is this duty ever fully consummated, in grave exigencies, unless we give our patients all the readily obtainable help at our command? Consultations we do hold with specialists, not so often or so frankly as should be, but many times, if we held our neighboring practitioners in just esteem, a life could be saved, suffering would be spared, and, what is more, the appreciation of the public would be won, if we oftener held conferences with others. Men of the law do this thing. Unless direct opposition of interests exist they freely consult each other, sometimes for a fee, oftener with expectation of none. Clergymen hold regular conferences, in some churches, recognizing that they are laboring in a common field to elevate the better parts of man. So of other learned professions; surely nowhere in the realm of human endeavor is enlightenment more needed than among the conservators of health and life. To a limited extent, in large cities, in the meetings of special medical societies, there is ventilation of opinions on pertinent subjects. Particularly is this done among specialists, as in the sections of academies of medicine and associations of physicians and surgeons on occasions selected for discussing the details of narrow specialities, and enormous advantages follow. Individual jealousies are then largely sunk in the breadth of the view taken and the elaborateness of the discussion.

In more sparsely settled communities, even where there exists some semblance of organization, as is well known, frank, full discussions are rather shunned than welcomed. Even in certain great cities there are large areas occupied by excellent medical practitioners where there are few or no local organizations; certainly too little interest is exhibited in the practical workings of these societies where they do exist. Some few of the practitioners are members of the greater societies, but geographical remoteness is regarded as a tenable excuse for rare attendance on meetings.

The ideal organization would be a central meeting place, with a membership actuated by high ideals, presided over by wise and liberal-minded men, and represented by local branches of definite areation, with official meeting places. In each section there should be not only a fair, but full and liberal membership, including all good men properly qualified, constituting a great army whose efficiency would be demonstrated in proportion to the perfection of their organization system. Among such educated, enlightened men there could be no lack of able leaders; all should wish to be faithful soldiers, who would glory in working shoulder to shoulder in a common cause. For the cause is a common one, to which all conservators of human health are committed by devotion of heart and head.

To be sure, the science of medicine requires that her votaries shall acquire means of sustenance while doing duty. Go further, if you like, and call the practice of medicine a legitimate business where each one shall do the best for himself according to his abilities and opportunities. If, however, we estimate on a mere business basis, by which the largest results are made to follow the smallest efforts, assuredly those who have entered the field with this object had better turn back and seek other and more profitable occupation before it is too late. Arguing on the full expectation of adequate material returns, however, even here every argument is in favor of enlightened organization and co-operation.

Take for a moment the question of knowledge, the paramount item of equipment. Information comes largely from books and first-class periodicals. In the more scattered sections, among medical men of small capital, books and knowledge of scientific advancements constitute, in large measure, their capital. The admirable plan of co-operative libraries indicated by Geo. M. Gould and spread abroad so persistently by C. D. Spivak in the now defunct journal, *Medical Libraries*, offers inestimable advantages. This is, in brief, for any number of doctors in a certain locality, for example ten men, to purchase, after due conference, five new books a year and take one leading journal, each according to his inclinations so far as possible; then, pooling their issues, to form card catalogues of their books. There is thus constituted a library of fifty new books each year and ten journals to circulate among the members.

This is a large library for any one man to enjoy, be he rich or poor, and many, in fact enough, periodicals to read, and the cost to each man is small. Over and above the value of the information thus disseminated is to be estimated the personal, more or less intimate, acquaintanceship inevitable on the interchange of library courtesies.

The selfish or merely material view of acquisition is worthy of attention; indeed, when all is said and done, we are all influenced, and rightly so, some less, some more, by personal considerations. Let us suppose a body of practitioners in a region somewhat remote from societies, hence few may have become members. These men are relatively free lances, because not bound by the code of ethics or by special ethical regulations of county or of other societies. They have come to regard each other in the light of competing shopkeepers, doing the same kind of business in a community which is often overfurnished with medical advisers. One man has a well-to-do, but not a wealthy, patient, concerning whose condition he is distinctly anxious or puzzled. He hesitates to put the patient to the expense of a consultation with the specialist of his choice, but would be glad of counsel. He delays till the condition has become so grave that the patient dies suddenly. The family has ample ground for dissatisfaction, even for anger; he loses the family and a large measure of reputation, and he richly deserves to do so. Now, had he and his neighboring physicians felt the common bond of adherence to formulated ethics, he would feel at full liberty, early in the progress of the case, to call a conference with one or more of his medical colleagues, from the stimulus of which good would almost immediately follow.

Each one of these physicians would receive a conference fee, presumably the same or a little larger than the ordinary one, but less than that of the specialist consultant. The patient would be only too glad to pay, and not only he but the family and all the conferees would be pleased, and the attending physician would thus enhance his reputation as a wise, judicious and liberal-minded man. Suppose, further, that the patient dies suddenly and unexpectedly; no blame whatever can be fastened on the physician. He not only did his best, but the responsibility was shared with the reputable practitioners of the neighborhood. Again, take a common instance. Each physician acquires some special skill or dexterity, the outcome of taste or of accidental training. Suppose a man with some painful state consults the physician of his choice who happens to have little acquaintance with the class of maladies represented. He calls on a defective memory and may be guesses, giving drugs and diets to no effect. He might again have recourse to the distant expensive specialist, but he may not know enough of the nature of such troubles to select a suitable one. In disgust the patient goes to an osteopath or to a bonesetter who at least has been taught certain elementary physiologic principles, among which is to examine the part carefully from the standpoint of mechanics, and who has a crude knowledge of the influence of the vasomotor system and of the distribution of the innervation from the segments of the cord and something about inflamed joints and lymph stasis and tissue infiltrations. This man, boasting that he knows more than many doctors, which is often true, promptly and with much flourish readjusts the parts, uses pressure and counter-pressure, and, behold, the case is cured. Thereupon not only the blundering physician is blamed for taking money under false pretenses, but the whole medical profession is sunk low in the estimation of a voluble community and the osteopath is practically invited to move into the neighborhood, to the confusion of all, physicians and laymen.

Now, if among the medical men one or more had enjoyed some instruction in the art of massage or manipulative measures and had been called in conference, his eyes being opened to the efficacy of looking at the part, and to the power of mechanical treatment, he would know that drugs had no place there, only the doing of the one right thing.

It may be objected that these conferences might lead to jealousies and to the belittling of one man's knowledge compared with that of another; I answer not so, by repeating that each individual medical man is probably capable, even brilliant, in recognizing and relieving disorders in one or more specialized lines. By such means the one and the other supplement and broaden their powers by frank, trustful co-operation, gaining a practical knowledge of their several capacities. Each and all are the better for their confidence, each and all make more money, retain their influence with the individual, with the family and with the community. We are brothers in a common cause, we are laborers supplementing each other's limitations, we are warriors arrayed against a common foe; not only disease and death, but the ever wakeful, ever critical kicker and traducer and welcomer of "pathies" and mysticism which constitutes so large a part of the inclinations of common humanity. Yet we slave our lives out trying to keep these people alive and well. Assuredly we can exert a vastly better influence by joint action than by individual unaided, narrow-minded endeavors. By this co-operation we are enabled to cover the whole realm of medical practice otherwise impossible to the best and wisest.

Finally, let me ask what is the position of the medical profession as an entity in the national councils. How far does the influence of medical thought reach in national or state legislation? How much of good could this influence exert on the welfare of the nation, on national or on sectional economics? These and other correlated and virtally important questions must be answered by each one in much the same key. One only, and a practical answer, can be offered here.

The power of the aggregate medical influence in a country is practically boundless and for good of a most diverse and as yet undefinable character, provided individual physicians could be made to realize their own value and could be brought to exert their influence in mass. To do this presupposes thorough, painstaking organization, a full discussion of all such subjects as naturally fall within the *jurisdiction* of physicians, a wise formulation of conclusions reached, and a courageous maintenance of recorded convictions. If each reputable physician in America were a member of the American Medical Association and fulfilled his duty in local and centralized organizations, not only would the power of medical opinion become invincible, but individual self-respect would reach a high plane. Not only so, but, individual values being thus raised, proportionate earnings would follow. The public is perfectly willing to pay well for value received and they would quickly become content to pay more for better service not only in times of exigency for personal attention, but for the knowledge that through and by intelligent watchfulness of local and national interests they would be better served, better protected and that future needs would be anticipated and met.

THE DEVELOPMENT OF FIBROIDS OF THE UTERUS AFTER ABLATION OF THE APPENDAGES.*

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Medical literature teems with papers, discussions, essays and books on the subject of fibroids of the uterus in their multiform variations. Fifty-three pages of the Index Catalogue of the Library of the Surgeon-General's office were required to list the titles of the literary productions on tumors of the uterus received in that magnificent library previous to 1893. Of these, fully three-fourths are concerning fibromata and myomata. In the Index Medicus, the list is ever increasing and probably twice as many treatises have been published since, as before, the year mentioned.

Nor does the search for knowledge of uterine fibroids lose any of its energy. New facts concerning these tumors are constantly coming to light; formerly they were considered benign from beginning to end, and they were supposed never to begin before puberty or after the menopause; all these points have been absolutely refuted, at least from a practical standpoint. The large number of published cases of fibroid tumors that have undergone malignant degeneration, or that have broken down, become infected, or undergone other changes in structure detrimental to the lives of their unfortunate possessors have swept away the old ideas as to their benignancy. In fact, pathologists are now searching for a distinct borderline between benign and malignant soft uterine myomata. Recurrent myomata, while not so positively dangerous as cancer, must be considered *malignant*. Between these and sarcomata there is not always a distinct difference. That they may appear before the establishment of the menstrual function has been abundantly proved. Even the single case of Sutton should go far toward convincing the heretic of this fact. Sutton found a fibroid in the uterus of a childless widow, who had been twice married and had never menstruated or shown any physiologic evidence of ovulation. It had been there twelve years. In 1898,[1] I published a paper, probably the first, on the subject of fibroid degeneration of the uterus after double salpingo-oöphorectomy. It remains as the only paper on the subject in medical literature with the exception of a report of a case by Hey Groves which will be quoted later in this paper. I have noted incidental references, however, to cases like that of Ries[2] in his most excellent article, "The Pathology of Stump Exudates After Salpingectomy." The third case therein mentioned is that of a woman, from whom, several years ago, both tubes and ovaries were removed; then fibroids developed in the uterus and in 1897 vaginal hysterectomy was performed by Dr. F. Henrotin. The cases I have had were as follows:

Case 1.—C. B., colored, aged 26.

History.—Both appendages were removed for pyosalpinx of gonorrheal origin (supposed) in 1895. The patient was ill but four weeks previous to operation. She had been married two months and had not been pregnant. The uterus at time of operation was about normal size and was not uneven on its surface. The following March she reported having had profuse hemorrhages from the uterus in January and February, and severe and almost constant pelvic pain.

Examination.—An examination revealed an enlarged and nodular uterus.

Treatment.—I did vaginal hysterectomy by morcellation. The uterus was found much enlarged, probably three times its normal size, and studded with numerous small fibroids, none having a diameter of more than half an inch. These tumors were distributed throughout the body of the organ, being directly under the peritoneum and endometrium, as well as in the middle of the muscular wall.

Case 2.—Mrs. R., white, aged 32, married.

History.—The patient has one child, 14 years of age, no other pregnancy; this labor was followed by fever and she has continually suffered since with pelvic pain, profuse flow and dysuria. In September, 1895, she had moderate fixation of the uterus, endometritis and a doubly lacerated cervix. Curettement and trachelorrhaphy were then done with the expectation of separation of adhesions of uterus and appendages at the same time. However, when the abdomen was opened considerable pus was found in both tubes and the appendages were removed. The uterus was palpated, seemed in good condition and was not removed. She recovered and returned home in buoyant spirits. About a year later she began to have considerable losses of blood from the uterus and pains through the pelvis.

Examination and Treatment.—In December she called at my office and the uterus was found fully double its normal size and distinctly nodular. Hysterectomy was advised and the following month it was done through the vagina and by morcellation. The uterus contained several very small fibroids.

Case 3.—Mrs. B., white, aged 36, multipara.

History.—The patient was operated on for double ovarian dermoid cysts in November, 1899. Menstruation returned, and with severity fourteen months later. It continued profusely with intervals varying from ten to twenty-two days until I saw her about eight months later.

Examination and Treatment.—At this time, the uterus was found to be more than double its normal size and nodular. Vaginal hysterectomy was done and eight small fibroids were found distributed through the uterus. Adhesions to the organ were marked.

Case 4.—Mrs. W., widow, white, aged 46.

History.—The patient had had both appendages removed in another city six years before she consulted me in June, 1903, for severe pelvic pain, frequent urination and profuse and irregular uterine hemorrhages of two years' duration. The irregularly shaped uterus extended nearly to the umbilicus and was removed by morcellation by the vaginal route.

The case reported by Hey Groves[3] previously referred to was as follows:

Fibroid tumor of the uterus developed after both ovaries and tubes had been removed for independent disease (dermoid cyst).

Patient.—A woman aged 45 had had four children, *the last* six years previously.

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* Read at the seventeenth meeting of the Southern Surgical and Gynecological Association at Birmingham, Ala., 1904.

[1] The National Med. Rev., Washington, D. C., vol. viii, pp. 1-5.

[2] Amer. Gyn. and Obst. Jour., January, 1895.

[3] Obstet. Trans., London, 1903, vol. xlv, p. 136.

History.—In November, 1896, she suffered from pelvic pain and abdominal swelling caused by an ovarian tumor. Both ovaries and tubes were removed completely. The right ovary contained a unilocular dermoid cyst. Complete amenorrhea followed for thirteen months. In December, 1898, bleeding occurred, lasting six days, with clots and pain. Menstrual periods then occurred with intervals of five weeks, then four weeks, and in 1901, three weeks, the flow remaining six days and the pain being very severe.

Operation.—In April, 1901, the uterus, *containing a fibroid about the size of a small fetal head*, was removed by abdominal hysterectomy. The mass removed weighed one and a half pounds and was nearly spherical, measuring from 3½ to 4 inches. A single, densely hard fibroid tumor occupied the posterior wall of the uterus. No trace of tubes or ovaries could be seen. The patient recovered and is now in good health.

Of these five cases two were operated on for non-infectious disease, two were victims of infection and in one the condition requiring removal of the appendages is not known.

It may be suggested that these growths antedated the disease that involved the appendages or developed coincidently with it, and that they were present at the time of operation. This may be the truth. It is by no means impossible for uterine fibroids to be so small as to escape detection by palpation of the uncut uterus even with fingers in the peritoneal cavity. As evidence against it, however, it may be said that in such case they must have been exceedingly small thus to escape detection. It may also be said that their development, apparently entirely after ablation of the appendages, is contrary to the opinion formerly held by most gynecologists, but now by but a few. It casts a strong shadow of unbelief on the efficiency of removal of the appendages to produce atrophy of uterine fibroids, an operation that gained a firm foothold in Europe and found many adherents in this country. It is very common for gynecologists having large clinics frequently to see cases of good sized uterine fibroids that the possessors have not been cognizant of until many years after cessation of menstruation. Does the sudden change in the pelvic circulation, incident to the ligation of the utero-ovarian blood vessels in double salpingo-oöphorectomy, act as a cause of the subsequent fibroid degeneration of the uterus? This question may be reasonably answered in the negative, else such degeneration might logically be seen commonly instead of rarely. Yet, it may be possible that hemorrhagic infarcts in the uterus may occasionally be produced in a manner that will result in a hyperplasia of connective tissue and be the origin of fibromata.

Whether in the process of uterine atrophy etiologic factors of this condition arise is very improbable, though the possibility must be admitted.

That the formation of pelvic adhesions incident to appendage disease, particularly when of infectious nature, may cause fibroids is possible; but here again must be considered this very common condition acting as a cause of a very rare one.

Does an infectious process of the uterus of some special degree or variety gradually bring about this fibroid degeneration? This seems highly probable, though problematic. A cursory consideration of the changes in the uterus after ablation of the appendages in the lower animals may be interesting in this connection. I quote from a paper published by Hunter Robb[4]: "Solokoff[5] noted the following changes in the uterus after bilateral castration in dogs:

"1. Marked changes in the muscular layer, which is the chief constituent of the uterine wall. (*a*) Atrophy in the circular layer setting in as early as six weeks after castration. (*b*) Disappearance of muscle fibers in the longitudinal layer, the fibers being less close than in the corresponding layer in the normal animal. The layer is diminished to half its normal thickness.

"2. No changes in the vessels. The atrophy increased in direct proportion to the time which had elapsed before the dogs were killed. In specimens from a dog killed fourteen months after operation the following were noted:

"1. There is no trace of atrophy in the mucosa.

"2. The circular layer does not present so broad a ring as in normal specimens. It is thin and the muscle fibers are separated, and in places broken.

"3. The vessels are much altered. They are much thickened; their lumen is narrower than normal, and many are obliterated. The intervening tissue is atrophied to such an extent that the vessels often touch one another.

"4. The longitudinal layer has almost entirely disappeared."

He shows atrophy begins first in the circular layer and is intense; in the longitudinal it is slower but continuous. The mucosa remains unaltered. Neither fatty degeneration nor albuminous clouding was noted, but there is much change in form in the individual muscle cell. The fibrillary substance has disappeared and only the nucleus and a granular protoplasm are left. Solokoff reasons that the effect of castration on the uterus is manifested through the nervous system since decreased blood supply—the only other assignable reason—does not result from ligation of the ovarian arteries and since the direct connection between the ovaries and the uterus through the central nervous system remains. In castration this connection is broken. Moreover, Rein has demonstrated that isolation of the uterus from the central nervous system by severing the branches of the sympathetic or of the sacral nerves has no influence on nutrition of the organ and that this atrophy occurs after the function of the ovaries has disappeared at the menopause. As the ovaries are the points of departure for stimuli to the uterus, the removal stops the functions of the uterus, which are necessary for the preservation of any muscle. Gottschalk[6] and Kleinwachter corroborate Solokoff's contention.

In the uterus of a woman removed three months after castration Benckeiser noted an endarteritis obliterans to which he referred the atrophy noted. Gottschalk found in another specimen removed eighteen months after removal of both ovaries for bilateral gonorrheal pyosalpinx that atrophy was greater in the body of the uterus than in the cervix. The individual muscle cell showed a decrease in the size of the body and of the nucleus. The intermuscular tissue was *increased*, but he could not decide whether he was dealing with a progressive fibrillary metamorphosis of the muscle cells or with the end products of an old inflammatory process. The endarteritis found by Benckeiser he could not discover, though he did note a marked folding of the intima of the larger vessels corresponding to the functional diminution in the size of the lumen produced by an increased tonus in the vessel wall.

From these experiments and investigations one can find but one theory on which to base a cause for the development of fibroids after double salpingo-oöphorectomy. That is the endarteritis obliterans noted by Benckeiser. I wish the relation was clearer and that more cases could be cited in substantiation. In all the cases of development of fibroids of the uterus after removal of the appendages cited in this paper, the tumors were multiple, showing the existence of a number of foci, and pathologists, I believe. have been interested in endarteritis obliterans in the uterus as the origin of fibroid tumors. The cases of such development of fibroids after castration are probably rare and their existence must be due to some rare cause such as is this form of endarteritis. In the absence of a better explanation I am disposed to accept this one.

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[4] Cleveland Med. Gaz., May, 1898.

[5] Arch. f. Gyn., 1896, vol. li, p. 2.

[6] Arch. f. Gyn., 1897, vol. liii, p. 2.

A CASE OF TYPHOID PERFORATION OF THE INTESTINE WITH SURGICAL TREATMENT AND RECOVERY.

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Patient.—Male, age 38, single; occupation, miner.

Previous history unimportant.

History.—His illness began 37 days before he was admitted to the University of California wards in the San Francisco County Hospital. At that time he was working in the mines at Mojave. The onset was marked with weakness and dizziness and alternate diarrhea and constipation. He stopped work, but did not go to bed. After going from place to place for five weeks he was admitted to the hospital on Nov. 17, 1904.

Examination.—On entrance he had a temperature of 101.8 F., liver and spleen were slightly enlarged, there were roseola on abdomen, and tenderness and gurgling in right iliac fossa, diazo reaction was present, and the Widal reaction was present in dilution of 1 in 40 in 45 minutes; hemoglobin, 65 per cent.; leucocytes, 6,500.

Treatment.—Treatment for typhoid fever was instituted, and during the next four days a gradual decline in temperature took place, the curve ranging from 98.4 to 101.8 F. The highest temperature on the day before the perforation was 100.4 and the lowest was 99 F.

Course of the Disease.—On November 22, the forty-second day of the disease, the temperature dropped to 97.2 F. at 4 in the morning. At 8 a. m., just after drinking milk, he complained of severe pain in the right iliac fossa. This was at once reported to the interne, Dr. Castlehun, who deserves credit for recognizing the condition and for instituting the proper temporary treatment. An hour later the patient had a severe chill, and the pulse rose to 124 and the temperature to 103.4 F. Examination just before the chill showed tense muscles on the right side of the abdomen, marked tenderness over the cecum, and a dull note over the ascending colon. This dullness was apparently due to the condition of the abdominal muscles and the empty contracted intestine underneath. The liver dullness was clearly defined at the costal margin. The leucocyte count at 9 o'clock was 10,600; at 10 o'clock, 7,300.

The fall of temperature to 97.2 F. four hours before the pain was noticed was probably the actual time of the occurrence of the perforation, but the taking of food at 8 o'clock started peristalsis that caused the sharp pain. The chill at 9 o'clock undoubtedly marked the beginning of peritonitis. This is an important symptom in the diagnosis of perforation. One may not always be justified in separating the symptoms of the shock of perforation from the symptoms of peritonitis, but in this case, with a fall in temperature at 4 o'clock, sharp abdominal pain and muscle rigidity at 8 o'clock, and a chill an hour later, it would seem that the first symptoms were due to the perforation itself and not to peritonitis. Before the first early signs of peritonitis it is very difficult to make a diagnosis. At any rate, in this instance the sudden fall and subsequent rise of temperature, the acute pain in the right iliac fossa, the tenderness, the rigid muscles, the quick rise of pulse, the chill, and the presence of typhoid fever as a cause, enabled a diagnosis of perforation through an ulcer to be made, and the patient was immediately taken to the surgical ward for laparotomy, with most satisfactory results.

The subsequent history will be dealt with from the surgical standpoint.

Examination by Dr. Huntington.—I saw the patient November 22 at 10 a. m., with Dr. Ebright, who had made a diagnosis of typhoid intestinal perforation.

At this time the evidences of profound shock which were manifested at 8 a. m. had measurably subsided; in fact, I hesitated to concede the correctness of Dr. Ebright's opinion. There was no distension and, save over the right lower abdominal segment, tenderness was not especially noticeable. The temperature rose rapidly from 101.4 F. at 8 a. m. to 103.2 F. at 11 a. m. The pulse rate showed a corresponding increase from 84 at 8 a. m. to 140 at 11 a. m. Three white blood counts made between 8:45 and 11 a. m. were interesting. The first showed 10,600 leucocytes, the second 7,300 and the third, just before operation, 6,400.

Operation.—The patient was taken to the operating room at about 11 a. m., and under ether anesthesia the abdomen was opened by a vertical incision 3½ inches long at the outer border of the rectus. The peritoneal fluid was slightly increased and appreciably turbid. The visceral peritoneum was deeply reddened, but there were no lymph deposits and the various loops of bowel were not agglutinated. The small bowel was picked up at the ileocecal valve and was carefully inspected. At a point 8 inches from the colon a small perforation was found in the center of a dark colored elevated area, the size of a nickel, marking the location of Peyer's patch. The opening was about the size of a pin head, but through it the contents of the bowel spouted freely during manipulation. The perforation was closed by a purse-string suture, to which a second was added.

The structure of the bowel adjacent to the perforation was fairly normal and there was no inclination for the sutures to tear out. On further inspection of the ileum it was found that there was no evidence of ulceration proximal to the perforation. Between that point and the ileocecal valve two other elevated patches were found at 2½ and 5 inches from the valve. The covering of the latter was much thinned, and another perforation was impending. Accordingly it was fortified by a purse-string suture. The covering of the third patch seemed fairly resistant and it was not interfered with. The appendix looked angry and was evidently in a state of more or less acute inflammation, but owing to the unfortunate condition of the patient it was thought best not to prolong the period of anesthesia by its removal. At this stage of the procedure, toilet of the perineum became a matter of extreme moment. Irrigation of the general cavity was not considered seriously. The bowels being held aside, large gauze pads were inserted to remove free fluid. This was followed by careful sponging with smaller pads until practically all the peritoneal fluid was eliminated. Despite the fact that Harte and Ashurst and authorities generally agree that drainage should be employed in these cases, I determined to close the wound as in an ordinary clean laparotomy.

The immediate closure of the wound without drainage in the average case of typhoid perforation can not be regarded as a legitimate procedure, but in this instance drainage was omitted because of the small amount of extravasation which had occurred and because of the resistance which the peritoneum manifests when the original focus of infection has been removed at an early period. When sufficient time has elapsed after perforation to admit of extensive peritoneal involvement, drainage by gauze wicks through two or more channels, as suggested by Richard H. Harte, is imperative.

Result.—The patient left the operating room in a state of moderate shock, but reacted well in the course of one hour, at which time his pulse was 108 and respiration 20. For the first forty-eight hours he was fed by rectum, then mouth feeding was gradually resumed. During the first five days he ran a temperature from 100 F. in the morning to 102 F. in the evening, about as he had been doing before the perforation. There was a free bowel movement on the third day, and the wound at this time seemed to have closed *per primam.*

On the morning of the fifth day a stitch abscess was discovered in the upper part of the wound, which discharged about two drams of thick pus. On the seventh day the discharge manifested a distinctly fecal odor. Following this there was a free discharge of bowel contents, necessitating reopening of the entire skin wound. Fortunately the bowel opening communicated freely with the wound and there was no evidence of peritoneal infection. Gradually the discharge lessened, the sinus became narrowed and about January 1 it closed permanently.

The patient is now convalescing rapidly. He is able to be up and about the ward and is approaching perfect recovery.

That the occurrence of fecal fistula is not so serious as might be imagined is evidenced by the statement of Harte and Ashurst, that of 16 patients who withstood the immediate shock of operation, and in whom a fecal fistula subsequently developed, only two, or 12.5 per cent., died. A fecal fistula, according to the same authorities, is of favorable import. Such lesions rarely fail to heal spontaneously, but, if necessary, reparative measures may be adopted after complete convalescence.

My experience in dealing surgically with typhoid bowel perforations is confined to three cases. The first occurred in 1901. The patient was a woman in whom the perforation occurred sixty hours before operation. There was general peritonitis due to extensive fecal extravasation, and death occurred twelve hours later. The second case, curiously enough, was operated on the same day as the first. The patient was a man in whom the perforation occurred about forty hours prior to operation. He was suffering from diffuse peritonitis due to fecal extravasation, and died sixty hours later. The reasons for the more fortunate termination of the third case are clearly assignable to prompt recognition of the lesion and immediate resort to radical measures for relief.

The operative tolerance of typhoid patients, even those whose vitality has been markedly lowered by the previous illness, is widely recognized. It is maintained by Harte and Ashurst that deaths following surgical interference have rarely been due to operation. Of twenty-six exploratory laparotomies in which perforation had not occurred sixteen patients recovered. The nine fatalities in this series were clearly attributable to causes independent of operation.

R. R. Fitch, M.D., reports from the services of Drs. Vickery and Minot at the Massachusetts General Hospital, 4 cases of laparotomy during typhoid fever. Two were for typhoid perforation, one for a pus tube, and the fourth was for an acute appendicitis. All the patients recovered, and these were all the cases of typhoid subjected to laparotomy during the summer of 1904.

Many other cases of a similar nature could be added to the list of typhoid laparotomies with a favorable result.

In 1903 Harte and Ashurst reported to the American Surgical Association 362 cases of operation for typhoid perforation. This series was collected from the literature covering the period from 1884 to 1903. Of this series, 94 patients recovered and 268 died, the mortality being 74.03 per cent. In a more recent article Keen, commenting on published statistics, calls attention to the progressive fall in mortality in cases operated on, from 90 per cent. in the earlier to 69 per cent. in recent years. He further states that individual operators, with exceptional hospital facilities, have had a much lower mortality rate, and expresses the belief that in the future surgeons may anticipate a ratio of recoveries amounting to from 40 to 45 or possibly 50 per cent. To this end the doctrine of Mikulicz, enunciated so early as 1884, must actuate the surgeon of to-day: "If suspicious of a perforation, one should not wait for an exact diagnosis, but proceed immediately to an exploration, which in any case is free from danger."

STENOSIS OF THE PYLORUS IN INFANCY.

AN ANALYSIS OF 115 CASES.

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"The pylorus was invested with a hard, compact substance or schirrhosity, which so completely obstructed the passage into the duodenum as to admit with the greatest difficulty the finest probe." Thus wrote Hezekiah Beardsley[1] in 1788 from New Haven, Conn., after having examined the stomach of a child who had had "puking and regurgitation of milk" from birth, but who, although much emaciated, had lived, in spite of this rejection of food, until she was 5 years old.

Beardsley's case of 1788 is the first recorded instance of obstruction at the pylorus occurring in infancy. It is a record of importance. In 1841 Williamson[2] recorded the second case of pyloric stenosis. The child died when five weeks old. In 1842 Dawoski[3] reported the third instance. This case likewise died when five weeks old. From the time of the case of Dawosky to that of Hirschsprung[4] of Copenhagen in 1888, a period of forty-six years, medical annals contain no clinical instances of infantile pyloric stenosis.

With the paper of Hirschsprung, in 1888, begins the record of modern cases. Experience with pyloric stenosis in infancy only covers, therefore, a period of about seventeen years. The earlier records are incomplete, but the recent reports are more nearly accurate.

A critical consideration of the accumulated medical and surgical experience with stenosis of the pylorus in infancy should serve to clear away many doubts concerning it and to place its treatment on a definite basis.

The keen interest of the medical profession to-day in stenosis of the pylorus in adult life has led to greater accuracy in its diagnosis and to most brilliant surgical results. The experience gained by our knowledge of the adult condition should prove of value in a study of infantile stenosis.

SUMMARY OF THE REPORTED CASES.

There are available records of some fifty-five autopsies of cases of infantile pyloric stenosis treated medically, and there is great uniformity in the returns from these autopsy reports.

In every instance a pyloric tumor is mentioned; a tumor unassociated with adhesions of any kind; a tumor varying in size and likened to a walnut, to a hazelnut or to a marble.

When one remembers how indefinite at times is the normal adult pylorus, and how difficult it may be to immediately *localize* it at operation and at postmortem examination, one is impressed by the definite picture of the pyloric tumor in these diminutive bodies.

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[1] Beardsley: Trans. New Haven Co. Med. Soc., 1788; quoted by Osler, Boston Med. and Surg. Jour., March 12, 1903.

[2] Williamson: London and Edinburgh Monthly Journal of Med. Sci., 1841, p. 23.

[3] Dawosky: Arch. Gén. de Méd., 1843, 4th series, vol. ii, p. 93.

[4] Hirschsprung: Jahr. f. Kinderheilk., 1888, vol. xxviii, p. 61; vol. iv, p. 596.

The pyloric tumor in each instance was very firm. It is described as being "hard," "very hard," "cartilaginous like" and "scirrhus." "It creaked under the cut of the knife."

Careful microscopic examinations of this movable, circumscribed, hard pyloric tumor show that the enlargement in every instance is due chiefly to a hyperplasia of the circular muscular fibers.

Once the longitudinal muscular fibers were found increased in size. Note the case of Greef.[5] The muscularis mucosæ in the case of DeBruin-Kop[6] was *thicker* than normal.

TABLE 1.—COMPARISON OF STOMACH WITH STENOSIS OF PYLORUS AND NORMAL STOMACH.

Measurements of the several layers of the normal pylorus at 4 months and measurements of the hypertrophied pylorus of the same age. Compare figures. Child had had symptoms for two *months. (From Gran.)*

MEASUREMENT OF TRANSVERSE SECTION.

	Hypertrophied Pylorus.	Normal Pylorus.	
Glandular Coat	600 microns	450 microns	
Muscularis Mucosæ	100	52	
Submucous Coat	300	225	
Tunica Propria	52	39	
Muscularis { Circular Fibers	2,775	1,390	
Muscularis { Longitudinal Fibers	225	260	
Serous Coat	60	26	
	4,112 mm.	2,442 mm.	1,670

MEASUREMENT OF TRANSVERSE SECTION OF STOMACH.

	.1 cm. Distant from Pylorus.	Normal Stomach.	
Glandular Coat	600 microns	375 microns	
Muscularis Mucosæ	75	39	
Submucous Coat	450	150	
Tunica Propria	52	39	
Muscularis { Circular Fibers	1,350	620	
Muscularis { Longitudinal Fibers	150	130	
Serous Coat	60	26	
	2,737 mm.	1,379 mm.	1,358

MEASUREMENT OF TRANSVERSE SECTION OF STOMACH.

	4 cm. Distant from Pylorus.	Normal Stomach.	
Glandular Coat	450 microns	450 microns	
Muscularis Mucosæ	52	39	
Submucous Coat	300	75	
Tunica Propria	39	26	
Muscularis { Circular Fibers	1,275	600	
Muscularis { Longitudinal Fibers	75	300	
Serous Coat	65	39	
	2,256 mm.	1,529 mm.	727

MEASUREMENT OF TRANSVERSE SECTION.

	Thinnest Part of the Fundus.	Normal Stomach.
Glandular Coat	150 microns	300 microns
Muscularis Mucosæ	26	45
Submucous Coat	75	150
Tunica Propria	26	39
Muscularis (entire muscular coat)	300	600
Serous Coat	26	39
	603 mm.	1,173 mm.

Because of the circular constriction of the pylorus the mucous membrane in most instances was thrown into more or less well marked longitudinal folds. These longitudinal folds of mucous membrane are of importance in connection with the *treatment of these cases*; obviously, they may obstruct the lumen of the pylorus.

In Ashby's[7] case the pyloric mucosa was "swollen." In Larkin's[8] case a new growth of connective tissue in the mucosa is described. The report reads: "There is a hyperplasia of the circular muscular fibers and a replacement of the tubular glands of the mucous membrane by new connective tissue."

Cautley[9] describes a single large longitudinal *reduplication of the mucous membrane lying on the posterior wall of the pylorus. Dawosky records* a thickening of the submucous lymphoid tissue. This has been observed by no one else.

In estimating the pathologic significance of the longitudinal folds of mucous membrane it must not be forgotten that they exist normally. Probably the folds noted postmortem are the normal folds somewhat exaggerated in number and in size because of a puckering occasioned in certain cases by the constriction of the pylorus, and in other cases by a new growth of connective tissue (as *described by Larkin*[8]). Prudden discovered in Meltzer's case a fibrous hyperplasia of the submucosa accompanied by the customary hyperplasia of the circular muscular fibers.

The varying thickness of the several layers of the pylorus and stomach has been carefully measured, both *macroscopically* and microscopically. Gran[10] in 1896 (Table 1) published one of the earliest records of such microscopic measurements, and presented measurements of the normal pylorus for comparison. The gross appearances of hypertrophy were confirmed by his observations.

TABLE 2.—Measurements of normal pylorus in eight infants within first years of life. Some shrinkage due to method of preparation. Considerable variation in the wall of normal pylorus. Compare 5 mos. 5 mos. = 10 mos. — 10 mos. Variation in normal pylorus due to variation in the circular fibers—not in *longitudinal fibers. Vide AB. and CD. for normal variations (according to Still).*

Age.		Thickness of whole wall.	Whole muscular layer.	Circular layer.	Longitudinal layer	Submucosa.	Mucosa.
4 wk.	(*a*)	About 1.8 mm.	1.18 mm.	A 1.05 mm.	C .13 mm.	.2 mm.	—
	(*b*)	" 2.2 "	1.55 "	1.3 "	25 "	—	—
4 mo.	(*a*)	1.5 mm.	1.05 "	.75 "	.3 "	.2 mm.	.25 mm.
	(*b*)	2 "	1.36 "	1 06 "	.3 "	—	—
5 mo.	(*a*)	2.6 "	1.6 "	1.1 "	.5 "	.5 mm	.5 mm.
	(*b*)	3.3 "	2.5 "	2.1 "	.4 "	—	—
5 mo.	(*a*)	1.7 "	1.15 "	.9 "	.25 "	.25 mm.	.33 mm.
	(*b*)	2 3 "	1.5 "	1.2 "	3 "	—	—
6 mo.	(*a*)	1.6 "	9 "	.7 "	.2 "	.2 mm.	.5 mm.
	(*b*)	2.4 "	1.73 "	1.4 "	.33 "	—	—
10 mo.	(*a*)	1.5 "	.82 "	.66 "	.16 "	.23 mm.*	.4 mm.
	(*b*	2.1 "	1.61 "	1.25 " B	.36 " D	—	—
10 mo.	(*a*)	2.4 "	1.51 "	1.1 "	.41 "	.3 mm	6 mm.
	(*b*)	2.9 "	2 "	1.5 "	.5 "	—	—
12 mo.	(*a*)	2.31 "	1 55 "	1.1 "	.45 "	26 mm	.5 mm.
	(*b*)	2.41 "	2.65 "	2.2 "	.45 "	—	—

Measurements of Hypertrophied Pylorus.

	Thickness of whole wall.	Whole muscular layer.	Circular layer.	Longitudinal layer	Submucosa.	Mucosa.
Case 1. 12½ weeks.	3.5 mm.	2.4 mm.	2.1 mm.	.3 mm.	.3 mm.	.8 mm.
" 2. 14 weeks.	3.7 "	2.7 "	2.4 "	.3 "	.4 "	.6 "
" 3. 14 weeks.	5.7 "	3.4 "	2.6 "	.8 "	.9 "	.4 "

*Approximate measurement.

Still[11] of London, in 1899 (Table 2), likewise made measurements of the normal pylorus at different ages, from 4 weeks to 12 months. He compared these with measurements of the hypertrophied pylorus. Still made measurements of eight individuals with normal stomachs and of three individuals with hypertrophied pylori (Table 2.)

Considerable variation exists in the normal pylorus for the same age, and the differences between the normal and hypertrophied pylorus are very striking.

The *important* fact demonstrated by these careful measurements is that the essential pathologic change in these cases is primarily an enormous hyperplasia of the circular muscle fibers of the pylorus and of the adjoining stomach wall. These postmortem findings are absolute.

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[5] Greef: Med. Rec., 1904, 66, 334.

[6] De. Bruin-Kop: Nederlan. Tydschr. von Grueseck, 1896, December.

[7] Ashby: Arch. of Ped., July, 1897, p. 408.

[8] Larkin: Arch. of Ped., August, 1901, p. 614.

[9] Cautley: Trans. Royal Med. Chirurg. Soc., 1899, vol. lxxxii, p. 41; Lancet, July 28, 1900, p. 256, 1904, i, p. 645; British Med. Jour., 1902, vol. 1, p. 1340.

[10] Gran: Jahr. für Kinderheilkunde, N. F. 42, 1896.

[11] Still: Trans Path. Soc., London, vol. 1, 1899, p. 97; Brit. Med. Jour., 1899, i, p. 340.

On the contrary, the postmortem measurements of the relaxed lumen of the pylorus can not be looked on as altogether comparable with conditions existing in life. If a narrowness of the lumen exists postmortem it probably was greater during life.

The degree of the stenosis does not always bear a definite relation to the extent of the hypertrophy. The stenosis is variable, and the pyloric orifice is described as of different sizes.

Pfaundler[12] has established an index of size of the lumen of the pylorus for different ages from birth to adult life (Table 3). This index he determined from measurements of the diameter of the normal pylorus. These measurements reduced to the Charriere or French scale of urethral sounds afford a ready method of determining postmortem and during life whether any given pylorus is above or below Pfaundler's scale. It will be important to have Pfaundler's measurements confirmed before accepting them as altogether accurate, but so far as I have compared them with measurements already made they seem satisfactory.

There is, of course, a slight individual variation in the size of the pylorus. A large child will have a larger pyloric lumen than a tiny child. The pylorus of one child at six months may take a certain sized sound with ease, while the pylorus of another child of the same age will scarcely receive this sound, yet no symptoms of obstruction may exist in the latter child.

TABLE 3.—DIAMETER OF PYLORIC LUMEN.

Pfaundler's index. Table showing the size of the lumen of the pylorus according to diameter in mm. and the French scale of urethral sounds.

Age.	M.M.	Charriere.	Age.	M.M.	Charriere.
Birth	6.3	19	10 mos.	9.8	30
1 mo.	6.9	21	11	10.1	31
2	7.3	22	12	10.5	32
3	7.6	23	.		
4	7.9	24	.		
5	8.2	25	.		
6	8.5	26	.		
7	8.9	27	.		
8	9.2	28	.		
9	9.5	29	.		

The lumen of the normal pylorus bears a definite relation to the physiologic needs of the individual. If the lumen is reduced beyond a certain point there is stasis or obstruction and, consequently, symptoms of such stasis or obstruction.

Fortunately, measurements of the lumen have been made directly or indirectly in almost all of the postmortems of pyloric stenosis. In all of these cases undoubted stenosis of the pylorus has been discovered.

It has been noted that even though a solid steel sound will pass through the pylorus with comparative ease, yet fluid can not always be made to pass. Note the cases of Cautley and Shaw. The obstruction offered to the fluid is due to the swollen and reduplicated mucous membrane. These folds are smoothed away by the sound.

To illustrate that these measurements vary in reported cases, and how much they fall below the average, i. e., the index of Pfaundler, consider the Gran case. The lumen was 3 mm. at two months. It should have been 7.3 mm. Note the Abel[13] case: The lumen would not take 3 mm. at eight weeks. It should have received 7.3 mm. Note the Batten[14] case: The lumen admitted a 4 mm. probe at eleven months. It should have admitted one of 10.1 mm., etc.

In most instances, in addition to the pyloric changes secondary changes are noted in the stomach; the muscular wall is found thickened (hypertrophied), especially throughout the pyloric segment. This muscular hypertrophy is found commonly in those cases which have died early. They have not lived long enough for dilatation to succeed the hypertrophy. Gran's third case illustrates well the hypertrophy of the stomach wall.

DeBruin-Kop's[6] case illustrates a great dilatation. The obstruction was practically complete in Kop's case. The child's symptoms began at birth, and the child died at the end of three weeks. The complete obstruction led to a rapid loss of compensatory hypertrophy and to an early dilatation which was noted during life. The stomach extended below the umbilicus. The esophagus was found dilated in a few instances. Note the cases of Thomson[15] and that of Pritchard.[16] The intestinal canal below the stomach was almost always found empty and collapsed—"shrunken."

The postmortem findings, therefore, are very definite and, except for minor differences of degree, invariable: a hard pyloric tumor, of constant structure—and a hypertrophied or dilated stomach—occasionally a dilated esophagus—a narrowing of the pyloric lumen—a hypertrophy of the mucous membrane—a collapsed intestine.

This picture from the dead house is the same picture which operating surgeons up to the present time have recorded in some 60 operations on the living child. The surgeons have found on the living the pyloric tumor in every recorded instance. The surgeon has seen, too, the secondary changes in the stomach.

The operator is often unable to measure the lumen of the pylorus. It is inexpedient. In those cases which were measured in life by the surgeon an abnormal narrowing has invariably existed. In all of the 55 autopsy cases there has likewise existed a narrowing of the pyloric lumen. Therefore, the surgeon may rightly conclude that in the cases operated on by him and not measured, the lumen is less than normal also. The evidence from these 115 cases, 55 autopsies and 60 operations, critically examined by pathologist and surgeon, affirms the existence of a constant lesion causing at the pylorus a more or less complete obstruction to the normal emptying of the stomach contents.

SYMPTOMS OF PYLORIC STENOSIS.

Fortunately we possess the clinical story in each of these 115 cases.

The symptoms are found to depend on the degree of the stenosis at the pylorus. The cases group themselves naturally, therefore, into those having complete obstruction and those with partial obstruction.

The symptoms are vomiting, constipation, the presence of a pyloric tumor, progressive wasting, visible gastric peristalsis, and latterly a dilated stomach.

Vomiting is the first symptom and it begins without apparent cause. It begins the day of birth or the day after (see the case of Ladd and that of Finkelstein), or is delayed a few days or weeks, according to the degree of the stenosis. In 52 cases the average time from birth at which vomiting appeared was 17 days.

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[12] Pfaundler: Wein. klin. Wochft., 1898, p. 1025.

[13] Abel: Münch. med. Wochft., 1899, No. 48, p. 1607.

[14] Batten: Lancet, 1899, p. 1511.

[15] Thomson: Scottish Medical and Surgical Journal, June, 1897; Edinburgh Hosp. Rep., 1896, vol. iv, p. 116.

[16] Pritchard: Arch. of Ped., 1900.

The vomiting is forcible, very expulsive, obstructive. It is apparently uninfluenced primarily by the quality of the food. Many cases have been breast-fed. See the case of Ladd. It is influenced, however, somewhat by the quantity of the food. It occurs usually immediately after a feeding or within a half-hour.

It may skip one or two feedings, and then the vomitus will be equivalent to the total amount of the previous feedings. A very great variety in the times of vomiting is recorded referable solely to the time of the feeding.

The material vomited may be liquid or curdled milk. It usually contains no bile. In the cases of Saunders[17] and Schwyzer[18] bile was present in the vomitus. The autopsy in these cases confirmed the diagnosis of partial pyloric stenosis. In one case because bile was present in the vomitus operation was postponed and the child died.

The presence of HCl in the vomitus is very variable; it may be absent, increased or diminished. Lactic acid is usually absent, and usually there is little evidence of a catarrhal gastritis. Blood has never been vomited in any recorded case.

The act of vomiting is not like the simple spitting up of milk so commonly seen in well babies, a running over of a filled stomach. The vomiting is persistent not in the sense that it is "cyclic," but that it is continuous, with occasional remissions between feedings. In cases of partial stenosis, remissions of a few days are recorded. The rapid increase in the flow of milk from the maternal breast on the third day after confinement results in the baby's taking at that time more liquid than formerly, and the third day is the time when vomiting often begins. It may be occasioned possibly by the sudden overfilling of the stenosed stomach. There is no evidence of nausea. The child is comfortable when the stomach has emptied itself.

Constipation is a usual symptom, depending, of course, on the amount of nourishment which is passed through the stenosed pylorus into the duodenum.

Nicoll[19] reports the case of a patient who had diarrhea. Hirschsprung's second patient also had diarrhea. Generally, the tongue is clean and moist.

The child is inordinately hungry, ravenous, and is pacified temporarily by food, only to show signs of distress when the contractions of the stomach empty the contents after the feeding. The eagerness of the child for its food is remarkable.

The child loses in weight because of starvation, and this loss of weight is progressive. Nicoll records one case in which he was deceived in the diagnosis because the child appeared quite plump and well nourished, but the typical hypertrophy was found.

The contraction of the stomach in attempting to overcome the stenosis may be so marked that visible peristaltic waves are seen passing across the stomach from left to right and ending at the pylorus. These peristaltic waves are very noticeable at the beginning, and early in the course of the case. When the stomach is greatly dilated and when the muscular contraction is diminished in power, the peristaltic waves are less and less apparent.

In those cases which had been ill longest, and in which there was a greatly distended stomach, peristaltic waves were seen less frequently.

In about 38 cases, or one-third of the 115 cases, peristalsis is mentioned as present. Of course, some of the 115 cases are incompletely reported with regard to certain facts.

The stomach is often found dilated, and in a few instances it is described as being below the umbilicus.

The epigastrium is distended by the dilated stomach, and there is a striking contrast between the epigastric fullness and the sunken appearance of the lower abdomen.

A tumor the size of a walnut may be felt a little to the right and a little above the umbilicus. The tumor is slightly movable and is rather deeply seated. The failure to discover the presence of a tumor does not mean that it does not exist, but simply that it is concealed either by the large liver, by the dilated stomach or by a normal abdominal wall. The tumor may become evident only when the pyloric portion of the stomach contracts violently.

Nicoll detected a tumor in 20 per cent. of his cases. One-half of these were examined under ether. In only 18 cases of those reported was a tumor recorded as palpated before the autopsy. I am positive that a more careful examination than probably was made in many of these reported cases would have shown the presence of a tumor. In many cases no attempt was made to detect a tumor. It is extremely easy to slip carelessly over the abdomen without noting evident conditions.

One may group the symptoms of the affection in typical cases as follows:

A perfectly healthy child is born; within a few days of birth vomiting, without evidences of nausea, appears —vomiting characteristic of pyloric stenosis. There is no bile in the vomitus. There is constipation, but the child has a clean tongue and a sweet, natural breath. A somewhat enlarged stomach is found, and there is visible peristalsis of the stomach. There is a palpable pyloric tumor and there is progressive wasting, though the child is greedy for food.

A careful review of these cases convinces me that clinically there are to be recognized two general groups, the acute fulminating cases and the subacute or chronic cases, or, to put it more accurately, the acute cases and the mild cases. From a pathologic standpoint the acute cases correspond to a complete or almost complete obstruction at the pylorus, while the mild cases are those attended by a partial pyloric stenosis.

The rapidity of the wasting is apparently not dependent on the degree of the stenosis. A moderate stenosis may be attended by great wasting.

These clinical observations are interesting in connection with the fact demonstrated at autopsy that the size of the pyloric tumor, which is the apparent cause of the obstruction, is not always indicative of the degree of stenosis present.

A very large proportion of all clinical cases are fairly typical. There is no question, however, but that apart from typical symptoms stenosis of the pylorus may exist. Cautley's[9] case illustrates this fact very clearly. A well, strong baby began to vomit when three weeks old. The vomiting was not characteristic, but persisted, although with remissions. The bowels moved, although the dejections were small and constipated. The child wasted, but during a period of two weeks gained 13 ounces in weight.

The child died of exhaustion when three months old. The autopsy showed a distended stomach and a pyloric sausage-shaped tumor one inch long. The lumen of the

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[17] Saunders: Arch. of Ped., April, 1902, p. 241.

[18] Schwyzer: N. Y. Med. Monthly, vol. viii, 1896, p. 674.

[19] Nicoll: Brit. Med. Jour., Sept. 1, 1900; Oct. 29, 1904, p 1148.

the

rdsley's historical case, in which a child lived to ge of 5 years with symptoms of stenosis from birth, illustration in point. The autopsy report corrobo- the clinical evidence that this case was one of ic stenosis continuing from infancy to childhood.

ansy[21] operated on a boy, aged 11 years, who had gastric disturbances from birth. A dilated stom-, vomiting and emaciation were the chief symptoms. operation a tumor of the pylorus was discovered m. long and 2.5 cm. thick. There were no cicatrices, hesions or ulcerations suggesting a previous inflamma-ry process. Hansy properly regards the case as one of yloric hypertrophy.

The cases of Seefish[22] and Sonnenberg[23] are pertinent n this connection.

Just here the evidence from Shaw's[24] case is extremely important. A child from infancy till the age of 5 years had recurring digestive attacks suggesting pyloric stenosis. Finally he died. Autopsy showed no lesion other than a hard pyloric tumor three-quarters of an inch long. The lumen of the pylorus admitted only a fine probe, and fluids could not be forced through the pyloric lumen. There were no ulcerations or evidences of old inflammatory processes. It was a case of hypertrophy of the pylorus, persisting and eventually causing death because the obstruction was unrelieved.

The results of the pathologic investigations of Maier[25] and Landerer have been adduced to demonstrate that some of the stenoses of adults have their origin in infancy and are in fact congenital. The work of these pathologists, however, is not to be accepted as final on this point, for their observations are unassociated with clinical evidence. It seems to me that Robson's adult case is not proved to be one of infantile hypertrophy.

(*To be continued.*)

ANKYLOSIS.

ARTHROPLASTY—CLINICAL AND EXPERIMENTAL.

JOHN B. MURPHY, A.M., M.D.,
CHICAGO.

(*Continued from page 1582.*)

CASES 1 and 2, Mr. W. D., aged 21, occupation, barber, was admitted to Mercy hospital July 9, 1901.

Present Illness.—This began in November, 1900, with high fever and very severe pains in the lumbar region. Shortly after onset the trouble extended to the hip, wrist and shoulder joints of both sides. He was confined to bed for six months. About one month after the onset both knees became affected. They were swollen and painful and for four months they were kept at rest in full extension. When the inflammatory process subsided both knees were stiff and this condition persisted. Since then he has walked only with the aid of crutches because of severe pain in the knees when his full weight is thrown on them. The trouble in the other joints subsided without ankylosis.

Previous Illness.—Two months before the onset of the present illness he contracted an acute gonorrhea, which persisted for about two weeks. Family history is negative.

Examination.—Both knee joints were ankylosed in full extension and permitted of no active or passive motion. Both patellæ were firmly ankylosed to femur.

First Operation.—On July 13, 1901, the patient was anesthetized and the adhesions in both knee joints were broken up by forcible manipulations. Passive motions were practiced daily after this but the adhesions rapidly reformed.

Second Operation.—Oct. 5, 1901. The usual preparations were made. Esmarch's constrictor was placed around the thigh and a vertical incision was made over the outer side of the right knee from 6 inches above to 3 inches below the joint. The incision was deepened and the capsule of the joint was opened (Fig. 11).

The patella was freed on the outer side, from fibrous adhesions to the femur with scalpel and chisel, and a second vertical incision 4 inches long was made over the inner side of the joint which was opened. The patella was then freed on its inner side from the articular surface of the femur. The ligamentum patellæ was not divided. The patella was elevated, the knee flexed and the adhesions between the tibia and femur were divided to give free motion in the joint. A large flap of fascia lata with a thin layer of muscle attached, was dissected from the outer surface of the vastus externus, its base being below and anterior. The flap was then turned over the outer condyle of the femur and then drawn through the joi between the two bones by means of heavy catgut sutures, p viously passed through its free edge and through the fibr capsule on the inner side of the joint. The sutures were in the inner incision (Figs. 10 and 11).

A small flap of fascia covering the vastus was disse free in like manner and was placed between the patella and femur. The flap was secured to the capsule with catgut ures. The Esmarch bandage was removed and the blee points were secured. Subcuticular catgut sutures were to close skin wounds. A small drain was left in angle of the external wound. Dressing and bandag plied. The knee was immobilized in full extension of a posterior molded cast of plaster of Paris.

Result.—Convalescence after operation was uneventf the wounds healed by primary union. The cast was r permanently after three weeks. The joint was massa

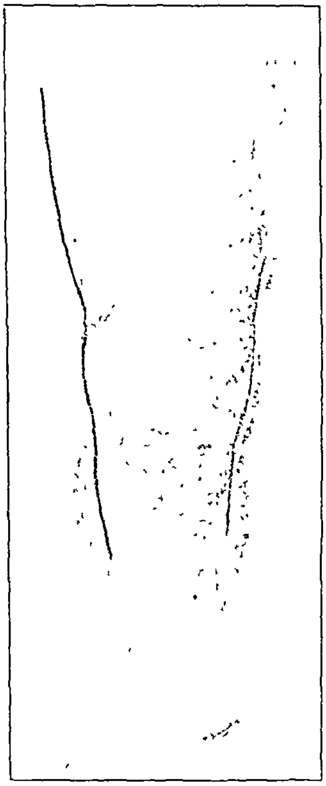

Fig. 11.

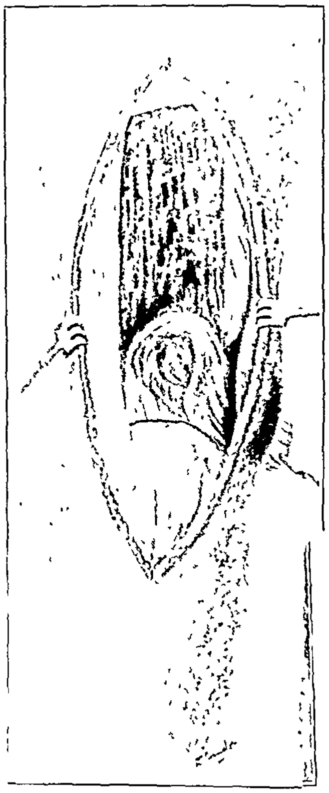

Fig. 12.

Fig. 11.—Case 1: Showing incisions on outer and inner surfaces of right knee.

Fig. 12.—Case 1: The facial flap, with its pedicle below, ha been turned into the knee joint.

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[21] Hansy: Wien. klin. Wochft., 1900, No. 10; Centralbl. f. Chirurg., 1900, No. 41, p. 1036.

[22] Seefish: Centralbl. f. Chirurg., 1904, vol. xxvii, p. 81.

[23] Sonnenberg and Resenheim: Berlin. klin. Wochft., vol. xxxvi, 1899, No. 32, p. 703.

[24] Shaw: Brooklyn Med. Jour., May, 1903, p. 211.

[25] Maier: Virchow's Arch., vol. cli, p. 413.

the old sinus into the acetabular cavity. This sinus was extraperitoneal and passed external to the internal iliac vessels. The opening in the posterior peritoneum was closed with catgut sutures and the anterior incision in the usual way. No drainage of the peritoneal cavity was used.

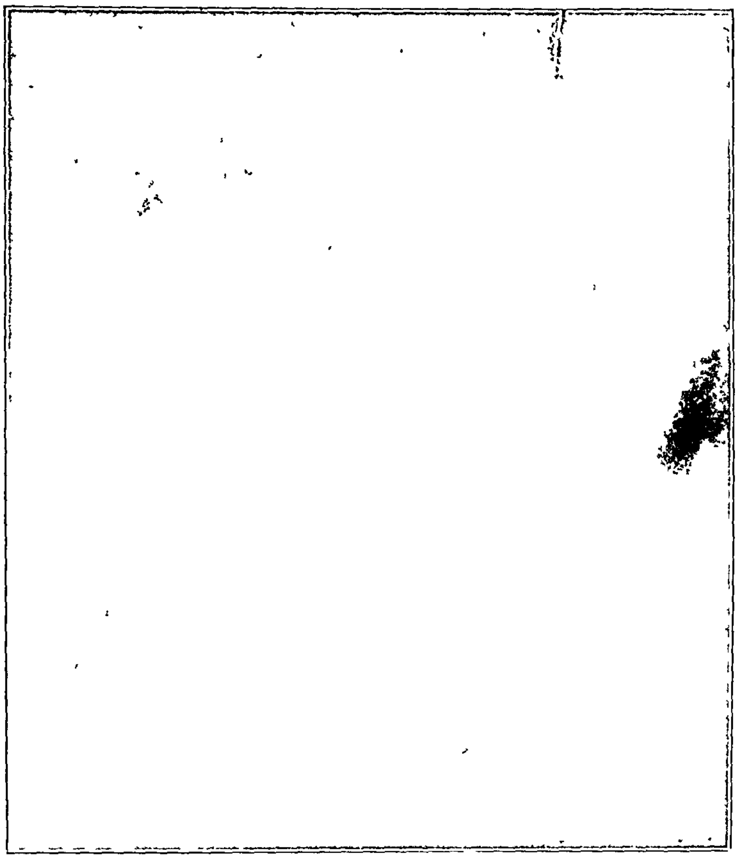
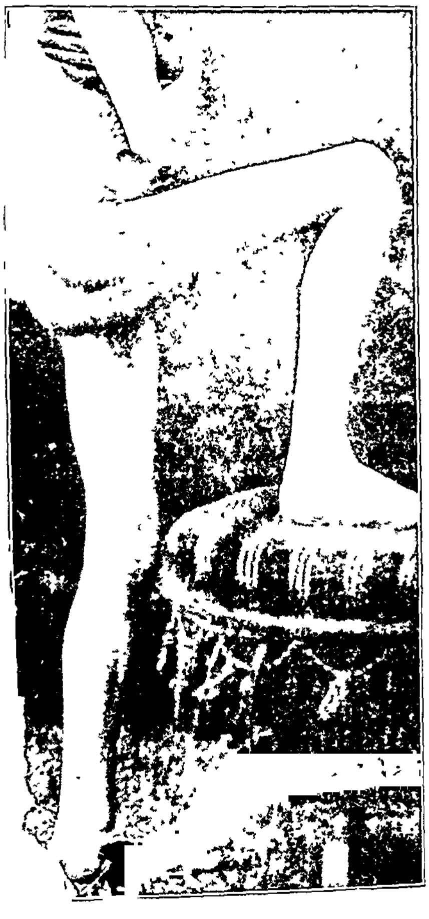


Fig. 19.—Case 4: Radiograph of right hip before operation, showing bony union between neck of femur and ilium.



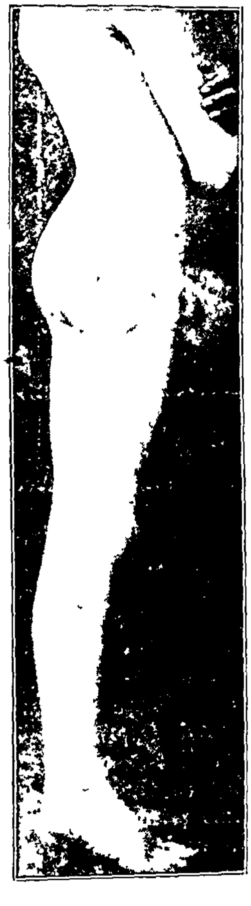


Fig. 20.

Fig. 21.

20.—Case 4: Photograph taken one year after operation, g normal degree of active flexion.
21.—Case 4: Photograph taken one year after operation, normal degree of extension, with 1½-inch shortening.

Result.—March 24 the sinus closed completely a
nently. A skiagraph of the hip taken April 25, 1903,
that there is complete bony union between the neck
femur and the ileum (Fig. 19).

Fourth Operation.—This operation for relief of the a
sis was performed May 2, 1903. The usual aseptic prepara
of the right hip and thigh were made. A U-shaped inc
was made, 5 inches wide with its base upward, beginni
inches above the trochanter and extending downward 2 i
below it. The trochanter was exactly in the center of th
The incision was through the skin, superficial fat and f
lata, and these tissues were dissected upward as one fla
long, curved needle, threaded with heavy silk, was pa
around the base of the trochanter beneath the muscles
tached to it, and by means of this carrier a chain-saw
brought into position. The trochanter was then sawn off
retracted upward. The capsule of the joint was next in
and separated from the ileum all the way around. The
tachment of the gluteus maximus was not disturbed.
bone was examined, and the neck of the femur was foun
be continuous with the margin of the acetabulum by

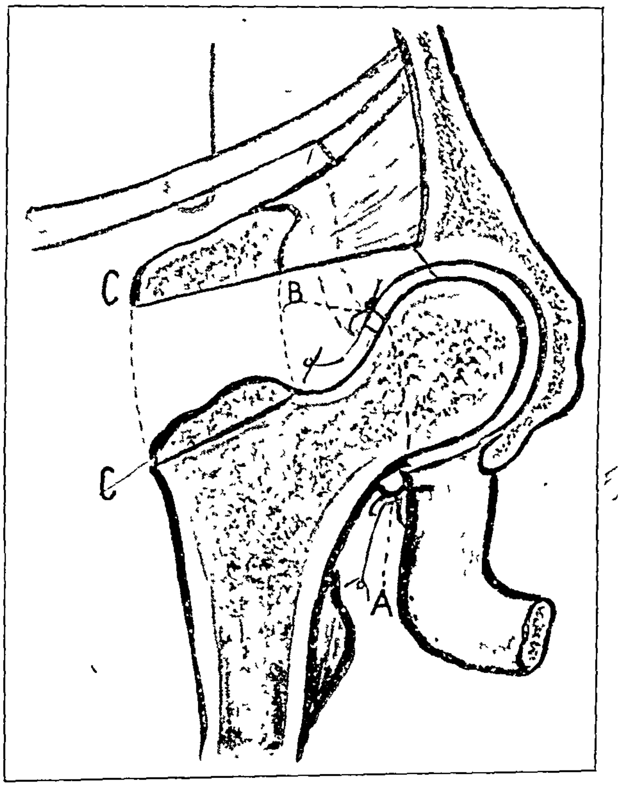


Fig. 22.—Case 5: Great trochanter (C), with its attached muscles turned upward. The fascial flap surrounds the head of the femur and is sutured to the capsule at A and B.

bony union. The formation of a new head for the femur and a new acetabular cavity was the next step in the operation, and was accomplished in the following manner: The bony tissue filling the acetabulum was chiseled free from the latter by following around its margin (the line of junction with the neck) with a carpenter's curved chisel, 1½ inches in diameter. The chisel each time was driven in obliquely toward the fossa acetabuli, the object of this being to make the new femoral head as nearly spherical as possible. When the chiseling process was completed, the new head was entirely separated from the sides of the acetabulum and was attached only at the bottom by a narrow bridge of bone. This bridge was fractured by forcible abduction of the limb, after which the head was dislocated from the cavity by external rotation of the thigh. The shape and contour were almost exactly those of a normal femoral head, except for a few sharp, bony projections which were removed by means of a bone-cutting forceps. Examination of the acetabulum showed that the opening at the bottom, through which the necrotic bone had been removed, was entirely closed by a deposit of new bone. A curette was used to smooth off the irregularities produced by e chisel and to enlarge the cavity. The fascia lata which rmed a part of the original U-shaped flap was now dis-eted away from the subcutaneous fatty tissue down to its se, where the vessels entered to supply it with blood. The flap of fascia was then drawn down under the head of the femur and carefully fitted into the acetabular cavity to form a complete lining for it. The under surface of the flap, one-half inch from the edge, was sutured to the joint capsule around the acetabular margin with interrupted catgut sutures to secure it and to prevent its subsequent displacement.

The new socket being in readiness, the head of the femur was returned to its normal position by extension and adduction of the thigh. It was found to fit accurately and it could not be dislocated by any of the ordinary motions of moder and degree. The free border of the fascial flap, which projec No from the margin of the acetabulum, was now sutured v was

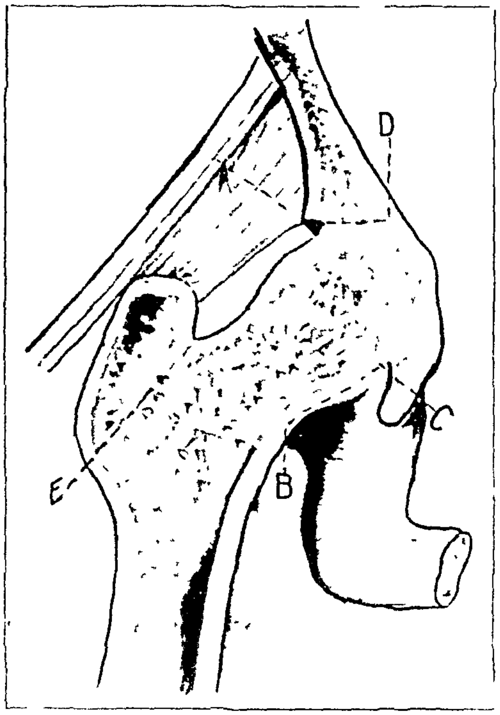


Fig. 23.—Case 5: Showing bony union between head of femur and acetabulum. In separating the bones the chisel was entered at points C and D.

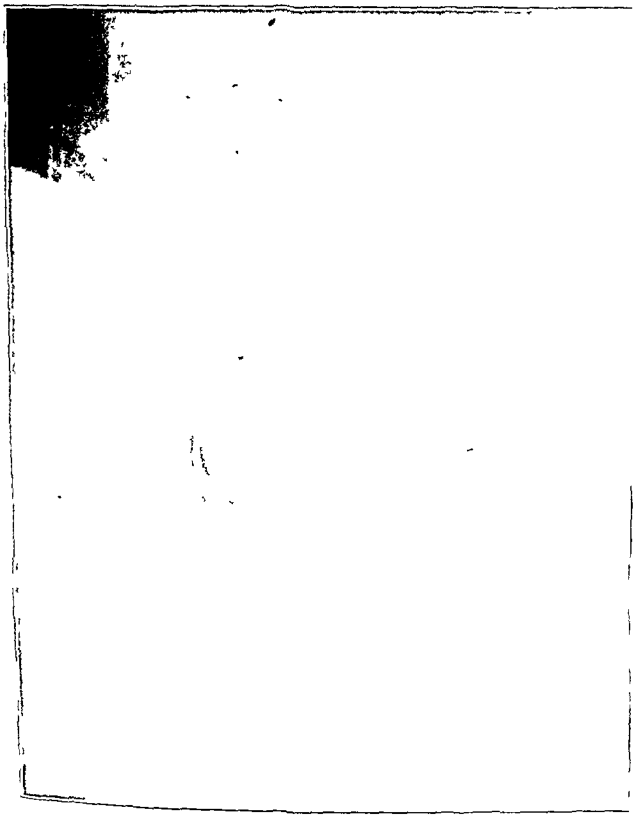


Fig. 24.—Case 5: Radiograph of right hip after operation, showing free joint cavity.

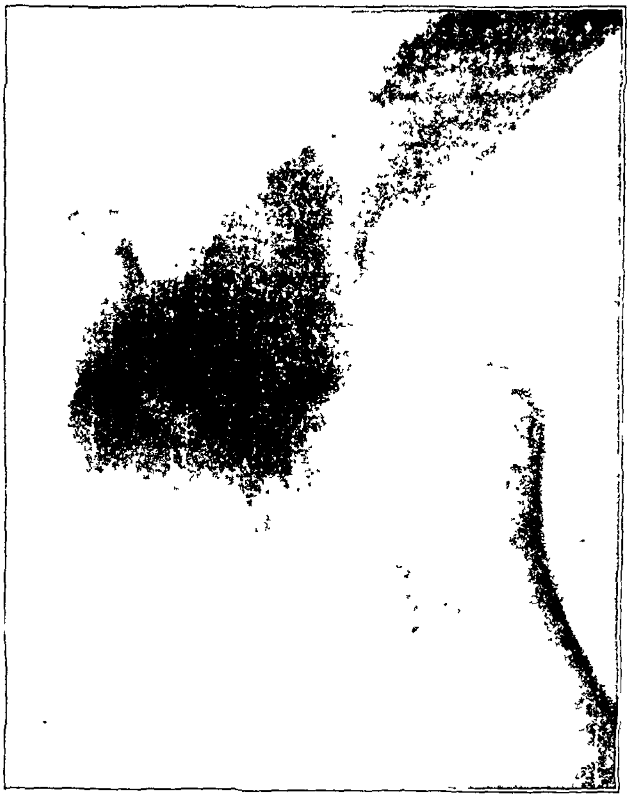


Fig. 25.—Case 6: Radiograph of left knee before operation, showing posterior subluxation of tibia and union between bones.

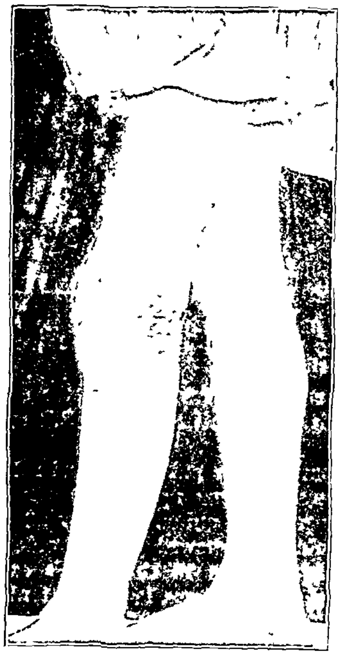


Fig 26.—Case 6: Photograph after operation, showing the knee extended and posterior subluxation reduced.

interrupted catgut sutures to the periosteum and the capsule was attached to the neck of the femur. The flap was amply large so that *it completely covered the head* and came well up onto the neck without tension. (I consider this a very important point; the entire articular surfaces of the bones must be covered by fascia if we are to expect a good functional result, *and the same applies to other joints.*) The great trochanter was brought down to its normal position and accurately secured with two aluminum bronze wire sutures. The skin flap was replaced and sutured with horse hair. No drainage was used. Because of the contraction of the flexors and abductors of the thigh, extension and abduction were limited and were accomplished only by the use of considerable force. This contraction was overcome by forcibly stretching the muscles, using the thigh as a lever and at the same time exerting with the edge of the hand strong pressure, combined with a sawing motion, over them near their points of origin, *after the Lorenz method.* The sartorius was divided with the scalpel close to its attachment to the anterior superior spine of the ilium. To retain the limb immobilized until the firm union of the parts was secured, a plaster cast was applied, including the pelvis and entire limb in full extension and abduction.

Result.—The patient was put to bed and a Buck's extension, with 10-pound weight, was applied to the right leg. The wound healed by primary union. On May 20 the cast was removed and examination showed great freedom of motion in the hip joint. After June 13 the Buck's extension was removed during the day, but was kept on at night. He walked for the first time with the aid of crutches on June 22, and continued to walk each day after that. *On July 11* examina-[illegible] showed that the hip joint allowed of fully 20 per cent. [illegible] normal amount of rotation and from 20 *to* 30 per cent. [illegible] normal amount of flexion and extension. The patient [illegible] the hospital July 18, 1903.

Subsequent History.—In a letter received from his father y 20, 1904, three photographs were inclosed, showing the range of motion in the hip. The father stated that the patient went to school every day and had not used a cane or crutch for several months. The motion in the hip is free and of normal extent and he has absolutely no pain. The photographs (Figs. 20 and 21) show flexion and extension to be normal. There is about 1¾-inch shortening in the limb, and he wears an elevated sole to compensate for this.

Case 5.—Miss M. S., aged 26 years, dressmaker, was admitted to Mercy Hospital May 2, 1903. Family and previous history negative.

Present Illness.—This began about eight years ago with an acute inflammatory process of the right hip joint. At that time the slightest active or passive motion was very painful and the region of the joint was extremely tender to pressure. After the third day the intense pain subsided and she was up most of the time. The trouble continued about the same for nine months, and during this time she walked very little without the assistance of a cane or crutch, because of the pain in the hip. As the trouble subsided, she noticed that the hip was stiff and that she could flex the thigh only to a very limited extent. The immobility of the joint gradually became absolute, and at the present time there is no motion at all. Nearly *two years* ago the same trouble developed in the left hip, but the progress of the disease here was more gradual. Her general health has been good.

Examination.—The right lower extremity was in full extension and was adducted *beyond the middle line*, with absolutely no motion in the hip joint. There was some tenderness in the joint on pressure over the great trochanter. The trochanter was in normal position. The muscles of the thigh were somewhat atrophied. *Afternoon temperature* varied from 99 to 99.6 F.

Operation.—May 21, 1903, arthroplasty, the technic of which was described under Case 4, was performed. In this case the head of the femur was *not destroyed*, but was united in the acetabulum by bony ankylosis. The bones were sepa-

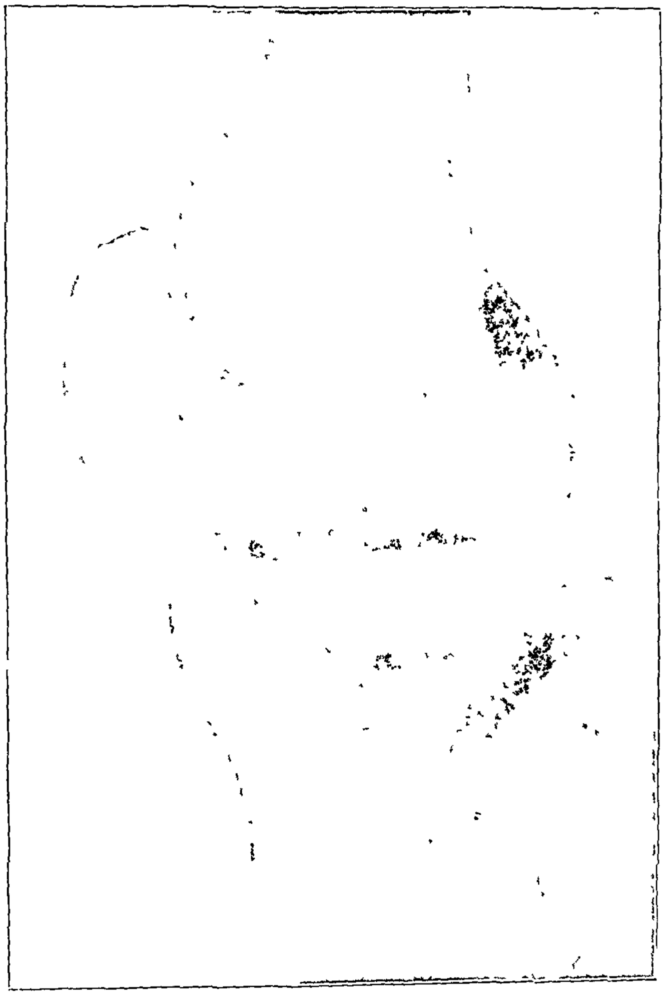


Fig. 27.—Case 6: Radiograph of left knee nine months after operation, showing separation of bones and perfect reduction of subluxation. Patella free.

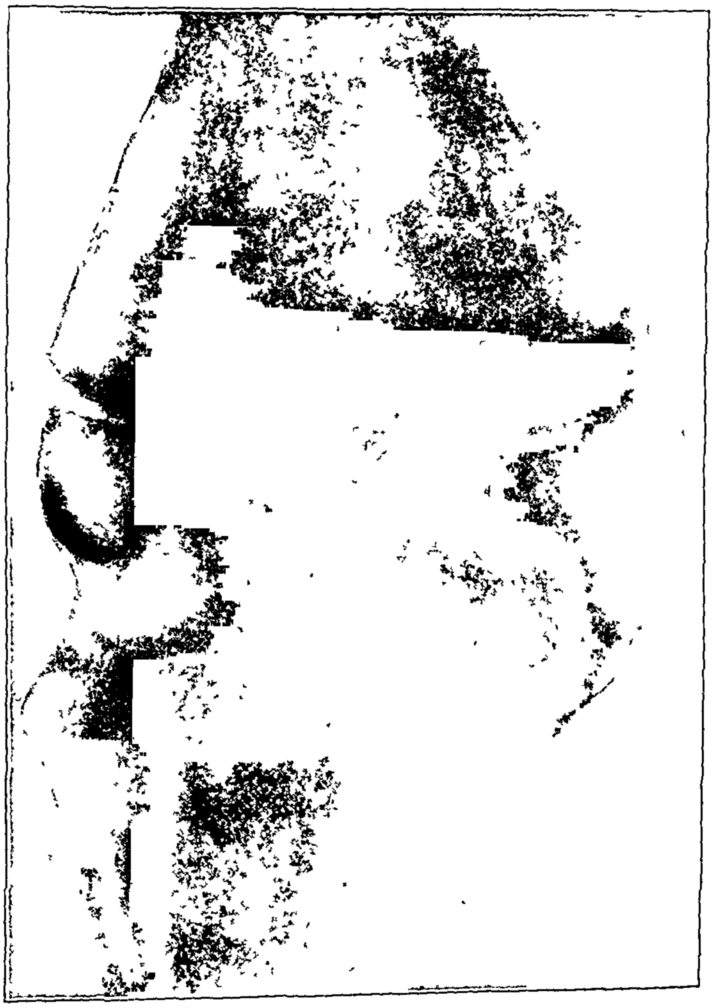


Fig. 28.—Case 6: Radiograph of left knee nine months after operation, showing free joint cavity.

rated through the lines of union by means of a chisel and mallet (Figs. 22 and 23).

The limb was immobilized in full extension by placing it in a plaster-of-paris cast, and when the patient was returned to bed a Buck's extension was applied. (I believe a better result would have been obtained if the limb had been dressed in a very abducted position.)

Result.—After operation superficial infection occurred, and a small tube was inserted in the upper angle of the wound. The sutures were removed on June 17 and the cast was taken off June 18. On July 27 the left knee became swollen, tender and very painful, and her temperature went up to 101 F. The pain and swelling continued until August 7. On that date the adduction of the limbs which had been present was overcome by placing a wedge between the knees and widening it each day until they were separated about 18 inches. The Buck's extension remained in place until about August 8, when it was removed. Examination on August 8 showed slight motion in right hip joint and considerable atrophy of the muscles of the right leg and thigh (Fig. 24). Faradic electricity and massage of thigh and leg were ordered daily. The patient was allowed out of bed August 15, and was around in a wheel chair every day after that. She walked for the first time with the aid of crutches on December 7, and was on her feet every day after that date. She left the hospital Feb. 15, 1904. At that time the wound was entirely healed and there was free motion in the right hip joint. She was very sensitive to pain and would make no effort to move the joint herself or to bear any weight on it.

Subsequent History.—Examination on June 3, 1904, showed the following condition: The patient is able to rotate the entire lower extremity from hip to extent of 30°. The arc described by the great toe during the rotation is used as measurement. When she stands erect on the left leg with pelvis fixed she can move the right foot forward 18 inches in front of a plumb line from the left hip joint and the same distance posteriorly to it. She is able to bear her entire weight on the right leg without pain, but always uses crutches in walking. She has made no attempt at any time since the operation to dispense with the crutches, because of fear of pain and injury to the hip. When lying flat on her back she can elevate right lower extremity to the extent of raising the heel 2 inches above the level of the table without pain. The wound is at present entirely healed. The muscles of the thigh are atrophied from non-use. The muscular contraction is quite pronounced in this case, particularly the adductors. (In the future when operating on the hip I will dress it in extreme abduction with extension.)

CASE 6.—M. L., aged 9, a school girl, was admitted to Mercy Hospital Aug. 26, 1903. Family history is negative.

Previous History.— She had "measles" four years ago, "whooping cough" one year ago.

Present Illness.—Five years ago, while at play, the patient fell, striking on her left knee. She did not complain much at the time, but two days later she began to have fever and pain in the knee, and a slight swelling developed above the patella. The swelling increased rapidly during the first few days, and at the end of three weeks it was lanced a little below the knee. No pus was found, but the wound did not heal, and shortly after operation it began to discharge a watery secretion, which continued for two months. At the onset of the trouble the knee was bandaged in a flexed position, and no attempt was made subsequently to straighten it. The result was that it became ankylosed at a right angle. Two years ago she was placed under an anesthetic and the leg was forcibly extended on the thigh. A plaster cast was applied and was worn for about one year. When the cast was removed the leg was flexed at an angle of 20°, but this flexion gradually increased until at the present time it is again a right angle. General health has remained good all of the time.

First Operation.—Aug. 29, 1903, all the ham-string tendons of the left leg were elongated by the ordinary method of tendinoplasty and the knee was then forcibly extended. As is usually the case after prolonged ankylosis of the knee at a right angle, there was subluxation of the tibia posteriorly (see Fig. 25).

Second Operation.—Sept. 14, 1903, arthroplasty was performed after method described under Cases 1, 2 and 3. Here, however, the ankylosis was fibrous and was limited to the outer condyle of the femur and to the outer portion of the articular surface of the tibia. The fascial flap, therefore, was interposed between these surfaces only, and its edges were sutured to the joint capsule. Three small foci of ancient suppuration in the articular surface of the tibia on the outer side were removed with the curette.

Result.—September 28 the sutures were removed. The wound healed by primary union. On October 17 there was a slight discharge from the lower end of the inner incision. Patient left the hospital Nov. 30, 1903 (Fig. 26).

Subsequent History.—From the time of the patient's discharge from the hospital until June 2, 1904, she did not report for examination or treatment, and in consequence the important postoperative treatment was neglected. On June 2, 1904, she presented herself at the office for examination. After leaving the hospital she had worn constantly an anterior cast extending from groin to ankle and immobilizing the knee in full extension. No attempt had been made by the patient or by others to increase the motion in the joint. There was a sinus at the lower angle of the inner incision which discharged a small quantity of pus. A moderate amount of swelling existed about the knee anteriorly, but there was no fluid beneath the patella and pressure over the joint was not painful. The muscles of the leg and thigh were somewhat atrophied from non-use. There was free and painless motion in the knee joint, both active and passive, to the extent of from 10° to 15°. The patella moved with the leg during flexion and extension, but permitted of no lateral motion (Figs. 27 and 28). She was able to walk and to run about all day without crutch or support of any kind, and had no pain even after prolonged walking or standing. The cast was removed and the patient was told to exercise the limb and to increase motion in the joint actively and passively.

CASE 7.—Mr. H. C. C., aged 23, electrician, was admitted to Mercy Hospital Dec. 31, 1903. Family and previous history are negative.

Present Illness.—June 21, 1901, the patient fell between two buildings and severely "wrenched his left leg." Immediately following the accident he suffered great pain in his left leg and thigh, but after a few hours he was able to walk and to go on with his work. Three days later he began to have pain in the left inguinal region. This pain persisted and a tender swelling finally developed in the left groin. The swelling was small at first and gradually enlarged until it attained the size of a hen's egg. On October 9 a physician incised it and evacuated a large quantity of pus. The abscess drained for nine months when the sinus healed temporarily. It reopened in July, 1903, and continued to discharge for about a year and a half. After the abscess was drained the patient suffered very little pain, except while running or stooping forward, when he would have some pain in the left hip. On Dec. 16, 1902, he was taken ill with what was diagnosed as "typhoid fever," and was confined to bed for five weeks. Two days after getting out of bed he had a severe chill, followed by fever and by sharp pain in the left hip and knee. He was again confined to bed for three months, during which time the pain in the hip and knee continued to be severe. While in bed, the thigh was flexed on the abdomen, adducted and rotated inward, no attempt being made to correct this faulty position. When, therefore, after three months he attempted to straighten the limb, he found it impossible. He still has a great deal of pain in the hip and knee, especially when he attempts motion, and pressure over the joint is painful. His general health is not good, his appetite is poor and he "cannot gain strength."

Examination.—The patient is of small stature, emaciated and anemic; heart and lungs negative; spine negative. The left thigh was flexed at a right angle on the abdomen, rotated slightly inward and adducted beyond the middle line. All attempts at passive motion of the hip were very painful and pressure over the great trochanter caused great pain. No motion could be demonstrated in the hip joint. The leg was flexed at a right angle to the thigh and the hamstring muscles were so contracted that extension was impossible. No ankylosis existed, however, in the knee. While this was not a favorable case for arthroplasty, as the tuberculosis was in the active stage, it was decided that the interposition of the fascia lata might hasten the repair of the tuberculous process, as aponeurotic tissue offers great resistance against this type of infection.

Operation.—Jan. 11, 1904. The operation performed in this case, differed from the typical arthroplasty which was described under Case 4 in the following particulars: 1. The tubercular femoral head and adjacent portion of the neck were excised. 2. The tubercular granulation tissue in the acetabulum was curetted out. 3. The fascial flap was sutured over the remaining portion of the neck and the latter was then placed in the acetabulum to form a new head. The edges of the capsule were approximated with catgut, and the limb was forcibly extended and adducted to stretch the contracted muscles of the hip and knee. When the thigh was fully extended and abducted, the end of the neck, or new femoral head, occupied a position beneath the prominent upper border of the acetabulum which held it securely in place and prevented its dislocation upward. A drainage tube was inserted at the lower angle of the wound. The entire limb was immobilized in a hyperextended and slightly abducted position by a plaster cast. The patient was put to bed and Buck's extension with 15 pound weight was applied to leg.

Result.—The skin wound healed by primary union. The sutures were removed on January 25, and the drainage tube January 27. Buck's extension was taken off at the end of the third week. He began to walk with the aid of crutches February 19, but bore no weight on the limb operated on until two weeks later. The cast was removed at the end of the sixth week, and the hip and knee were put through passive motions each day thereafter. On March 26, a small swelling above the left Poupart's ligament was aspirated and several drams of thick pus were withdrawn. Ten c.c. of iodoform emulsion in glycerin were injected into the abscess cavity and the puncture was sealed with collodion. The swelling rapidly diminished in size after the injection and the pain disappeared. April 10, a fluctuating swelling appeared about 5 inches below the inner end of the left Poupart's ligament. This was incised and several ounces of pus were evacuated. The patient left the hospital June 5. At that time he could bear some weight on the limb without pain, but was obliged to use crutches in walking. Examination showed the great trochanter to be in normal position and the limb fully extended, though slightly adducted. The motion in the hip joint though very limited, was perfectly free, showing that no bony or fibrous union had taken place between the neck of the femur and the ilium. I am now convinced that the limitation of motion here, as in some of the earlier cases, is due to the fact that the capsule of the joint was not entirely removed.

(*To be continued.*)

TOLERANCE TO NITROGLYCERIN.

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In a recent issue of The Journal,[1] there appeared a note concerning the administration of nitroglycerin in which the correspondent (Dr. Maddox) referred to a case under treatment at my service in the Jefferson Medical College in 1888. This patient was an interesting example of rapidly-acquired tolerance to the drug, as he was taking, as remarked by Dr. Maddox, when seen by him in the clinic of Dr. Da Costa, 20 grains of pure nitroglycerin daily. It may be of interest to state that this and similar cases in which marked tolerance to nitroglycerin was easily acquired, I made the subject of several papers some years ago. I reported this particular case in the *Philadelphia Polyclinic* in August and in December, 1888, under the caption of "Remarkable Tolerance to Nitroglycerin." Later, in a paper entitled "Tolerance to Nitroglycerin Easily Acquired: Limitations of Use of the Drug in Chronic Nephritis,"[2] I again drew attention to this case and discussed the restrictions under which nitroglycerin should be employed, and showed how similar effects of blood pressure could be obtained by methods other than the use of drugs. I regarded nitroglycerin then, as now, as a drug which is often of little service, because, despite intelligent employment, tolerance is too readily established. What I then said concerning this bears so directly on the question of the administration of the drug that I regard it as worth repeating here.

In the *Polyclinic*[3] of August and of December, 1888, I related a case of chronic nephritis, under treatment in the medical clinic of the Jefferson Hospital, in which, in less than six months after an initial dose of one drop of a 1 per cent. solution of nitroglycerin, such tolerance has been established that a dose of 50 minims of a 10 per cent. solution (5 minims pure nitroglycerin) was taken four times daily, with less effect on vascular tension than the initial dose of 1/100 grain.

In my experience, too readily acquired tolerance to nitroglycerin is not rare, the difficulty being to so carefully and intelligently regulate its administration that, while maintaining a constant slight effect on blood pressure, the increase in dose is as gradual as possible. In my case, in which 20 minims of pure nitroglycerin were taken daily, the patient had not been encouraged to increase the dose beyond an amount sufficient to produce more than a slight physiologic effect—a feeling of trifling fullness in the head. Yet, despite admonitions as to care in gradual increase, the patient, knowing the nature of his ailment, and believing that great curative power must reside in a drug the name of which suggests so much, and the effects of which on the vascular system were so promptly and powerfully exerted, apparently advanced the dose more rapidly than necessity demanded. Noting this, the drug was several times, at a few weeks' intervals, temporarily discontinued, a much smaller amount being directed to be taken on resuming it than that last used; the increase was also to be very gradual. Notwithstanding this, doses of 50 minims of a 10 per cent. solution four times daily were soon reached and continuously taken without the occurrence of any headache whatever, with but slight transient flushing of the face, and no very marked effect on arterial tension, as shown by the sphygmograph. A dose of 5 grains of pure nitroglycerin (in alcoholic solution) was procured from the apothecary of the hospital and was administered by me before Professor Da Costa and the class in the clinic, so that there could be no mistake as to the amount.

As I prescribe nitroglycerin frequently, I often encounter cases in which I believe similar inconvenient doses could be as promptly reached, with as little systemic effect as in the case just narrated, were a too rapid increase in the dosage to be permitted. When it is desired to employ this drug for a considerable period, for its effects on blood pressure, the best rule of administration, in my opinion, is to so proportion the dose that the intervals are comparatively short—never less than four times daily. The amount, though sufficient to produce some subjective or objective effect, should never be more than just necessary to cause the slightest feeling of fullness in the head or to slightly quicken the pulse; these last are certain indications that other desired physiologic effects occur. Unless unusual susceptibility exists, if enough is always taken to produce a more marked immediate result, such as flushing and slight headache, tolerance is soon acquired, and a quantity may be early reached altogether impracticable of administration. When a rather rapid increase seems necessary in order to maintain a constant effect, an equally important point is temporarily to discontinue the drug for two or more days, at intervals of two or three weeks. On its resumption, a much smaller initial dose will be required to produce physiologic effects than that last taken. So used, inconvenient tolerance will be less likely to occur, and the employment of strong solutions, the handling of which is not altogether free from danger, will be less necessary. It must be remembered that nitroglycerin, so far as we know, has absolutely no action in cases of chronic nephritis apart from its effect on vascular tension. It is only indicated in those cases in which the blood pressure is persistently markedly high, and in which ill consequences, such as cerebral hemorrhage or valvular disease of the heart, or stretching of its cavities, are to be feared. Cerebral hemorrhage is a late complication. It requires for its production not only vigorous heart action, but also weakened (generally aneurismal) cerebral vessels. Valvular disease of the slow sclerotic form, commonly mitral, is not infrequently encountered in cases of granular kidney of long duration in which cardiac hypertrophy has kept pace with prolonged arterio-capillary resistance. As Mahomed long ago showed, the pathologic conditions underlying the cardiac condition in these cases is more often recognized than that in which a leaking mitral has resulted from an overstretched ventricle. These various more or less remote sequences of persistent, raised arterial tension—save perhaps the last, to prevent which both nitroglycerin and a heart tonic may be required—are late phenomena, and usually less to be dreaded than certain more immediate results from undue lowering of vascular tone.

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[1] Feb. 11, 1905, p. 486.

[2] Therapeutic Gazette, September, 1893.

[3] Philadelphia Polyclinic, 1888, p. 172.

It must not be forgotten that probably a moderate amount of tension is actually conservative. It seems to be recognized that those cases of chronic Bright's disease in which tension is persistently low from the outset are actually of much more gravity than the commonly observed variety with raised vascular tone, and when arterio-capillary resistance shows a tendency to fail voluntarily, scanty urine, with more marked albuminuria, and dropsy, may be expected.

In the administration of nitroglycerin these points must be borne in mind, and the drug must not be prescribed merely because the case is one of chronic nephritis. Much more was originally expected of nitroglycerin as a remedial agent in conditions of persistent high tension than has been realized. I now employ it less frequently in such cases than formerly, endeavoring, at first at least, to bring about the same effect by limiting the nitrogenous intake and by maintaining a free action of the skin and bowels. The influence of constipation in heightening blood pressure is well known, but this fact is not always applied in therapeutics, and the modifying effects of diet receive even less attention. Nitroglycerin and the nitrites temporarily lower pulse tension without influencing the ever-present cause. The latter, if not arterio-capillary fibrosis—which is little controlled by any measure—is nitrogenous waste in the blood. Free action of the emunctories tends to overcome this, but the fountain-head must be sought for permanent relief.

I believe I was the first to report the employment of massive doses of nitroglycerin, which, as remarked, although apparently free from danger when reached gradually from initial small amounts, are, however, impracticable and inadvisable. In recent years I have rarely desired to exceed a dose of 10 drops of the 1 per cent. solution, and when from the initial dose of one drop tolerance to the larger dose is apparent, the drug is temporarily discontinued. I regard it as most important that other measures to lower blood pressure be coincidently employed and be tried alone. Especially is it important to restrict the nitrogenous intake, and occasionally to use a mercurial purge, or, more frequently, salines. Aconite is often substituted for nitroglycerin with advantage in these cases.

PERITONEAL GAUZE DRAINAGE.

AN EASY METHOD FOR ITS USE THROUGH THE VAGINA, AFTER ABDOMINAL SECTION.

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The fancied necessity for drainage after abdominal section has been greatly lessened by our knowledge that the peritoneum can easily dispose of considerable amounts of blood and serum and that ancient accumulations of pus are generally sterile. The real necessity for drainage has been greatly minimized by perfected methods of asepticity, by most careful repair of denuded peritoneal surfaces, by efficient hemostasis and control of all oozing, and by avoidance of unnecessary trauma in rude and violent manipulations. Classes of cases that were formerly drained routinely are observed to do quite as well without drainage; yet there is a small minority which requires it.

Abdominal drainage has been very generally abandoned for vaginal drainage when possible, except in general peritonitis, where the very large glass tube above the symphysis, combined with the upright sitting (Fowler's) position, leaves little to be desired. Glass is slow to excite lymph adhesions and a large area is drained longer than by any other material. In operations in the pelvis, drainage through the abdominal incision has the disadvantage of being more remote from the area to be actually drained, and therefore unnecessarily involves viscera that are above the infected site. The more or less inherent dangers of all drainage, i. e., adhesions, intestinal obstruction and fecal fistulæ, are invited.

The likelihood of wound infection from the drain, resulting in hernia, is perhaps the chief disadvantage. About all infected abdominal incisions have subsequent herniæ, which condition is very infrequent in wounds healing aseptically, and without the interposition of a drain. When, therefore, abdominal drainage is used, it is better to bring it out through a separate, small, stab wound, and to close the incision in its entirety. Where the drain must extend for some distance, and adjacent to uninfected viscera, to the point of delivery, gauze should not be unprotected along its whole length. It can be wrapped in gutta-percha tissue, like a cigarette in arrangement, but of any size, or can be encased in a split rubber tube.

In pelvic work drainage through the cul-de-sac into the vagina has the advantage of being very close to the area to be drained, is at the most dependent point, escapes through a natural avenue, is devoid of the danger of hernia, and less likely to occasion fistula, bladder disturbance, and secondary obstruction from adhesive bands. It, however, has the disadvantage that the vagina is difficult to render sterile and that infection of the peritoneum may extend from that source. Occlusive protection to the drain from the outside is also somewhat more difficult. The greatest objection to vaginal drainage is the difficulty of making the puncture through the cul-de-sac and of passing the gauze into the vagina. It is this obstacle that I have in my own work, to say the least, greatly overcome, and which is the purpose of this communication to describe.

The usual method of introducing gauze drainage is to have the patient let down from Trendelenburg's position, or unstrapped, if horizontal, the legs flexed, and the assistant, or sometimes the operator, introduces the fingers into the vagina and makes pressure into the posterior fornix with the fingers or forceps. The operator cuts through at the bottom of Douglas' space and passes the gauze down to fingers or forceps. The assistant has to re-sterilize his hands or, better, has to be eliminated from the subsequent steps of the operation. Aside from the time consumed in this method, which is sometimes considerable, the chief objection is that the vagina is often not prepared, and even if prepared there is likelihood of carrying infection from the outside.

Noble of Atlanta simplified the procedure by designing two instruments which he presented at the meeting of the Southern Surgical and Gynecological Association in 1901. One was a counter-pressure instrument, much like an enlarged Hunter's depressor, which was introduced into the vagina and which by pressure fixed the posterior fornix. It could then be punctured by scissors from above with ease and without danger of injuring any other structure. The scissors have a shoulder on the outside of each blade to prevent the margins of the incision from slipping up on the handles as they are opened to stretch the incision to the desired width. This technic relieves the procedure of some of its drawbacks, but the instruments are not in the armamentarium of every surgeon, and if they are, would not always be at hand. I attempted to simplify that feature still further and used, with considerable satisfaction in a series of cases, an ordinary tablespoon, which was inserted into the vagina and made to put the fornix on a stretch, while the blade of a pair of scissors was thrust through from above into the bowl of the spoon.

Unfortunately, in a bad pus case in an 18-year-old girl requiring drainage, the spoon in its introduction folded over the recto-vaginal septum in front of it and in cutting, as I supposed, into the vagina, the rectum was wounded. The resulting fistula into the vagina readily healed, but caused me to abandon the device. It illustrated, however, the efficacy of pelvic gauze drainage in protecting the peritoneal cavity from contamination in injuries of the bowel low down, if for any reason they are not, or can not be, sutured adequately.

In another series of cases, after preliminary disinfection of the vagina, before operations on the abdomen, where the vagina was packed with sterile gauze, I noticed how easily the mass of gauze could be felt and identified from above. In cases where drainage was necessary, I simply cut down on this gauze through the cul-de-sac and attached the drainage gauze to the vaginal gauze by a safety pin, and after closure of the abdomen the drainage gauze was drawn down by withdrawing the original vaginal packing. There are, however, many operators who do not pack the vagina as a routine, and this method has considerable limitations. Many sections are undertaken in which the necessity for drainage is not anticipated; indeed, it is not contemplated in the majority of cases. Sterilization of the vagina by ordinary antiseptic douches is notoriously inadequate. Few men have the vagina "scrubbed up" on the table when the operative procedure is limited to the abdomen, and unless the vagina is prepared beforehand through a speculum, it is usually not in an aseptic condition for the institution of drainage when it finally is determined on.

To obviate all these difficulties in the way of establishing drainage in the usual manner, and as an evolution of the methods heretofore mentioned, I have, for the last year or more, in a considerable number of cases, employed with entire satisfaction the following easy method, which I commend to you.

After the intrapelvic work is completed and drainage is deemed necessary, the gauze is introduced into the cul-de-sac and arranged as desired in plaits, the omentum is drawn down on the right side over the operated area and the sigmoid on the left, and the abdomen closed with the gauze left in. After the abdominal dressings are applied, the patient is drawn with hips to the edge of the table and the vagina cleansed thoroughly, as for any operative procedure. The bunch of gauze can be easily felt as a mass behind the cervix, which is steadied and drawn down with a volsella, and the fornix is opened with one snip of the scissors, cutting directly against the gauze, which is seized with forceps and drawn down. It can be done as quickly as it has been described. It has the advantage of being done under absolute aseptic control from the vaginal side and after the abdomen has been closed from above so that no danger of contamination is incurred. The drainage strip should be tied to the packing in the vagina so that there will be no possibility of ever leaving any gauze behind.

Iodoform gauze should always be used in the vagina, as an effective occlusive dressing is desired. It stays sweet longer than plain gauze. The 1-inch strips of 5 per cent. iodoform gauze with selvedged edge, which come in glass container, have been found most convenient.

The life-history of gauze as a drainage material is very short. The meshes soon become blocked with exudate, and its capillarity ceases. The gauze should not plug the aperture too tightly. The chief function of gauze drainage in a severely infected region of the peritoneum is not so much for its capillarity as for the quarantining of that area from the general cavity by the exudate which is so promptly and effectively thrown out around the area, with the gauze as the excitant. That is nature's plan for segregating all infections. The gauze invites and initiates this very plan.

Occasionally an abrupt rise of temperature occurs when gauze drainage is employed in conditions where free exudation occurs over a long time, and if it is withdrawn, a little quantity of serum will sometimes be found pent up. In cases of that sort, the gauze should be withdrawn a little each day. Generally, however, if gauze drainage is needed at all in the peritoneum, it should be left six days. It can then be easily withdrawn. The walls of exudate around it will be well formed and they are stiff enough to afford a pipelike drain from any septic point for some days without irrigation. If gauze is withdrawn too soon, the fresh granulations will be disturbed and bleeding occurs and atria for fresh infection are opened by the trauma. The external part of the tract may close if not kept open by frequent dressings.

I have not attempted to define the cases which require it. but merely to describe this simpler way of establishing gauze drainage through the vagina.

Special Article

IMMUNITY.

CHAPTER XVI.

PHAGOCYTOSIS.

As one may learn from the writings of Metchnikoff, phagocytosis in its broad sense has three distinct channels of activity: nutritional, resorptive and protective.

Phagocytosis for Purposes of Nutrition.

Phagocytosis for purposes of nutrition is most highly developed in unicellular ameboid organisms, but is found also in animals of considerable organic differentiation. It is perhaps nowhere more striking than among certain myxomycetes, which are large, naked, multinucleated, protoplasmic masses belonging to the plant kingdom, and which possess that peculiar, slow, undulating motility which characterizes the ameboid cells. Ingestion is accomplished through protoplasmic arms (pseudopodia) which are thrown out to envelop the object. Minute plant and animal cells, living or dead, are ingested in this manner by the myxomycetes, amebæ and other unicellular organisms and are subsequently digested by means of intracellular ferments. The ferments which have been extracted are proteolytic, digesting gelatin or fibrin, usually in an acid but sometimes in an alkaline medium; that from amebæ has been called amibodiastase. In the process of digestion a "vacuole," acid in reaction and containing the ferment, forms around the ingested particle. In certain unicellular organisms which are phagocytic the protoplasm shows a degree of differentiation, a mouth and an anus being simulated at points where the food is most readily taken in and discharged. Instances are cited in which ameboid organisms protect themselves against inimical cells by ingesting, killing, and finally discharging or digesting the latter.

Chemotaxis.

Pfeffer first described the phenomena of negative and positive chemotaxis in relation to the myxomycetes. Under certain conditions they either are attracted toward or move from moist places. That a negative chemotaxis may be changed into a positive was shown in relation to salt solutions. When placed in the vicinity of or in contact with strong solutions the cell recedes, whereas if one passes gradually from weaker to stronger solutions the latter eventually attract rather than repel the cell.

Intestinal Phagocytes.

As one goes higher in the animal scale intracellular digestion for purposes of nutrition is confined to rather definite groups of cells. The intestinal epithelium of certain multicellular invertebrates consists of "sessile phagocytes," cells which, individually or after fusion into plasmodial masses, surround and digest solid particles of food. It is said that in sponges the digestive tract is not sharply separated from the mesodermal tissue. and the cells of the latter share with the former the function of intracellular digestion.

Mesoblastic Phagocytes

In higher invertebrates and in all vertebrates the intestinal epithelium ceases to be essentially phagocytic, digestion being accomplished rather by the ferments which have been secreted by the intestinal and related glandular epithelium. Such animals, nevertheless, possess an abundance of phagocytic cells, but they are in the main mesoblastic in nature, and may have nothing more than a remote relationship to the nutrition of the organism.

Metchnikoff classifies the phagocytic cells of vertebrates into the macrophages and the microphages. The macrophages or large phagocytes include the large lymphocytes, endothelial cells, ameboid connective tissue cells and others which may occasionally take up foreign particles. Our polymorphonuclear leucocytes are the microphages. In relation to immunity we are concerned chiefly with the large lymphocytes (macrophages), and the polymorphonuclear leucocytes (microphages). Although such cells may contain many ferments Metchnikoff recognizes but one type in relation to their resorptive and digestive functions. This he calls cytase and distinguishes that of the macrophage as macrocytase and that of the microphage as microcytase. The two cells do not have identical activities, the macrophage being concerned especially in the resorption of tissue cells and in immunity to certain chronic diseases as tuberculosis and leprosy, whereas the microphage is the cell which is conspicuously antimicrobic in relation to acute infections.

Resorption of Corpuscular Elements.

Metchnikoff has studied the resorption of cells over a wide range of animals. He speaks of the process as the resorption of corpuscular elements. During the metamorphosis of certain invertebrates it is said that the larval tissues are disposed of by the action of wandering phagocytic cells. In involution of the uterus the muscular tissue is invaded by leucocytes which take up and digest or carry away the "retrogressive elements." Perhaps of more interest is Metchnikoff's conception of certain atrophic processes, particularly those which are grouped among the senile atrophies. In sclerotic atrophy of the ovaries the large lymphocytes invade the tissue, surround and destroy the ova and follicular epithelium and eventually. as fibroblasts, participate in the formation of fibrous tissue which to a degree is substituted for the original structure. In old individuals or in those of failing mentality it is said that ganglionic cells are found in a greater or less degree of atrophy because of the action of certain mononuclear phagocytes (neuronophages) which are contiguous to or form a zone around the cell. The neuronophages may represent mononuclear cells from the blood or those of proliferated neurogliar tissue. The best examples of this condition were found in very old dogs.

The Whitening of Hairs.

The chromophores of the skin, according to Metchnikoff, may be considered as chromophages. Whether or not they are of epithelial origin, as he claims, they are said to exist normally in the hairs in a latent or inactive condition. As old age comes on, or as a result of other obscure causes, their attitude becomes an active one, and they proceed to take up and digest the normal pigment of the hairs. Hence white hairs are the result of an autoparasitism by certain mononuclear phagocytes—an atrophic process.

In muscular atrophy it is held that the sarcoplasm takes up the striated tissue after the manner of phagocytes.

Cytotoxins.

We come into closer touch with our general subject of immunity when we consider the attitude of the phagocytes toward cells which are foreign to the host, for example, toward erythrocytes which are injected for the production of a hemolytic serum. Following such an injection into the peritoneal cavity there occurs a great accession of macrophages which ingest the erythrocytes, dissolve the hemoglobin and eventually digest the stroma. The same phagocytes are involved in the resorption of any other foreign cells of animal origin which may be injected. In view of the intracellular hemolysis by the leucocytes one may well suspect that the latter contain a hemolytic ferment; one which perhaps is analogous to the hemolysin (hemolytic amboceptors and complement) of a serum. On this point there has been a sharp discussion. Metchnikoff cites observations to show that a ferment of this nature may be extracted from lymphoid organs, that it contains a heat-susceptible constituent. and that when fresh it may be used to reactivate a heated hemolytic serum. This would indicate that the leucocytes contain cytase (complement), but it is not clear that they would also contain the fixators (amboceptors). Nevertheless the demonstration of an intraleucocytic hemolysin, coupled with the phagocytic power of the leucocytes for erythrocytes, forms the basis for the belief that serum-hemolysin is nothing more than intraleucocytic hemolysin, which under proper conditions may reach the serum or plasma. By an extension of the condition cited it is considered that all cytolysins are produced by the macrophages.

Thermostabile Hemolysin from Organ Extracts.

Korschun and Morgenroth, on the other hand, obtained from lymphoid and various other organs, not a thermolabile hemolysin, but one which withstands prolonged boiling—a coctostabile hemolysin which is soluble in alcohol, shows no amboceptor-complement composition, and is incapable of yielding antihemolysin by immunization. Such contradictory results, Metchnikoff holds, are only in apparent discord with those obtained by himself and his pupils, and are referable to the different methods of extraction which were employed. In order to obtain the thermolabile hemolysin uncontaminated with the thermostabile, the extraction must be a rapid one. If on the other hand it is prolonged, as Metchnikoff assumes that of Korschun and Morgenroth to have been, the intracellular ferments digest the remaining cell constituents, the thermostabile hemolysin being liberated or formed in the process of digestion.

Cytase an Intracellular Substance.

Cytase Becomes Extracellular Through Phagolyses.

Prevention of Phagolysis.

Metchnikoff has utilized experiments similar to the following in order to prove that serum-hemolysin is produced by the macrophage and that cytase under normal conditions is confined to the leucocytes. Given a guinea-pig which has been immunized with the blood of a goose: if fresh goose corpuscles are injected into the peritoneal cavity, the cells are hemolyzed in the fluid without the occurrence of phagocytosis. This is the experiment of Pfeiffer applied to hemolysis, and under these circumstances one must conclude that the cytase and fixators are extra-leucocytic. One of two conditions is possible: either the hemolytic bodies are present normally and continuously in the plasma of the immunized animal, or they become liberated at the time the corpuscles are injected. According to Metchnikoff the latter condition prevails rather than the former. He recognizes a phenomenon which bears the name of phagolysis, i. e., solution, partial or complete, or phagocytes. Almost any foreign substance or fluid which one may choose to put in contact with leucocytes so stimulates or injures them that they discharge certain of their constituents. If the fixators and cytase are among the constituents which are discharged at the time the injection is made, the extracellular hemolysis might depend on these substances rather than on bodies which pre-exist in the plasma. If this be true, and if one could in some way fortify the leucocytes against phagolysis the plasma would remain free from hemolytic power. Metchnikoff prevents phagolysis by a simple procedure, which demands nothing more than the peritoneal injection of a small quantity of bouillon or salt solution twenty-four hours in advance of the experiment. Possibly by this means the leucocytes have been habituated to the presence of a foreign fluid, or the new leucocytes which accumulate possess greater resistance. Whatever the explanation, the erythrocytes which are injected at this critical time are said not to undergo extracellular hemolysis, but instead are englobed and dissolved by the macrophages. These results and others of a similar nature are the basis for the belief that cytase normally is intracellular, and that it becomes extracellular only when the leucocytes are subjected to injurious influences. The fact that the serum of defibrinated or coagulated blood contains cytase is not in discord with such an opinion, for in this instance also the leucocytes may be injured to such a degree that certain of their constituents are discharged. We are well aware that fibrin-ferment is liberated under these circumstances.

Fixators Produced by Leucocytes.

It was equally desirable, if possible, to determine the relation of fixators to the leucocytes. The situation is, however, very complex, and although Metchnikoff regards the fixators as secretion or excretion products of phagocytic cells the question is perhaps not definitely settled. When phagolysis is prevented in the manner described, the injected erythrocytes may well absorb fixators from the plasma and still undergo no hemolysis until englobed by the phagocytes. It is considered that fixators in contrast to cytase may exist in the circulating plasma.

Phagocytosis in Immunity.

Phagocytosis as a feature of local resistance against microbic invasion was considered in relation to inflammation; we come now to speak of the relationship of the leucocytes to general states of immunity, having reference to the conditions which have been designated as natural and acquired antibacterial immunity, and natural and acquired antitoxic immunity.

Metchnikoff himself says that his first expressions concerning the antimicrobic activity of phagocytes, the power of freeing the organism from "invaders of every sort," were made altogether from an *a priori* standpoint in an address delivered in 1883, "Ueber die Heilkräfte des Organismus." He justified his position on general grounds, having in mind the "more general phenomena of phagocytosis and the resorption of corpuscular elements," as he had observed them in various zoological studies.

Natural Antimicrobic Immunity.

Shortly there came to him the opportunity of studying an infectious disease among the Daphnia (water-flea), a small transparent crustacean. The disease was caused by a blastomyces which forms a long needle-shaped spore. After being swallowed by the animal the spores penetrate the intestinal wall into the body cavity where they are surrounded, englobed and digested by the white blood corpuscles. If this occurred with sufficient vigor all the spores were disposed of and the animal recovered. Sometimes, however, the spores germinated even after they had become intracellular, and when the parasitic cells reached maturity they apparently had the power of killing the leucocytes through the agency of a secretion peculiar to themselves. In the event that the latter process was sufficiently extensive the tissues were soon overrun with parasites and death resulted from a septicemic condition. The observations were made in the living transparent animals.

Although the example cited seemed convincing it was, of course, necessary that observations should extend over many infectious processes before phagocytosis as the cause of natural immunity could be accepted as a general fact. This has been done on rather broad lines by Metchnikoff and his pupils, and the results have served to convince them that the phagocytes are responsible for natural immunity in all instances, and that the degree of natural immunity in a given case depends on the degree of phagocytosis which is manifested against the organism. As stated previously the microphage, with its microcytase, is held responsible for antibacterial immunity in most instances, although the macrophage is concerned in certain chronic infections.

Anthrax.

If an animal is susceptible to a virulent culture of anthrax, but resistant to a weak culture, the phagocytic power is found to be greater for the weaker organism. The highly virulent culture creates a condition of negative chemotaxis with the consequence that leucocytes are not attracted and microbic proliferation proceeds rapidly. Without going into details, studies of the following and perhaps other micro-organisms have strengthened Metchnikoff in his views: staphylococci, streptococcus, pneumococcus, gonococcus, vibrio of cholera in infections of the guinea-pig, the vibrio of goose septicemia in relation to the guinea-pig, which is naturally immune, the spirillum of relapsing fever, tubercle bacillus, yeast cells and other fungi, and certain animal parasites (*Trypanosoma lewisii*).

Toxins as Cause of Negative Chemotaxis.

Most important are certain conditions which create a condition of negative chemotaxis, or otherwise engage the phagocytes so that they refuse to take up the essential organism. Vaillard says that all animals are immune to pure cultures of the tetanus bacillus or its spores provided the latter have been washed entirely free of toxin. The absence of toxin permits of positive chemotaxis, and phagocytosis, whereas toxin when present causes negative chemotaxis, and the bacilli proceed to further toxin formation. The same is held to be true in infections by some other organisms.

Accidental Engagement of Phagocytes.

It seems definitely established that contaminating organisms (pyogenic cocci, *Bacillus prodigiosus*) may greatly increase the virulence of the bacillus of symptomatic anthrax, *Bacillus aerogenes capsulatus* and the tetanus bacillus—anaërobic organisms. On the one hand the secondary bacteria may produce more favorable conditions for the growth of the anaërobes by consuming local oxygen, or, as Metchnikoff believes, they may so engage the phagocytes that the latter have no disposition to take up the essential organism. This condition may be an important one in other mixed infections, as when the streptococcus complicates diphtheria and scarlet fever.

Acquired Antibacterial Immunity.

If the phagocytic power is an index of the degree of natural antibacterial immunity, is the same correspondence to be recognized when the immunity is acquired? To answer this question satisfactorily it is necessary to bring phagocytosis in relation to two different types of antibacterial immunity which it is possible to recognize. Cholera is an example of that type of antibacterial immunity in which the bactericidal power of the serum undergoes a great increase. It is stated that anthrax represents another type in which the immunity is not dependent on the bactericidal power of the serum. Probably the same may be said of acquired immunity to the streptococcus, staphylococcus and the pneumococcus, yet it is perhaps not definitely established that the immunity in these instances is antibacterial rather than antitoxic. For the present we may, however, with Metchnikoff, consider that the immunity is antibacterial and that it is a cellular or phagocytic immunity.

Anthrax.

Rabbits which have been immunized against anthrax respond to subcutaneous or intraperitoneal injection of a virulent culture by concentrating so vast a number of microphages at the site of inoculation that the fluid becomes purulent in appearance. Examination shows an enormous degree of phagocytosis. When, on the other hand, non-immune rabbits are submitted to similar inoculations, the fluid which accumulates locally is of a clear serous character, contains few leucocytes, and no phagocytosis is observable; the animals die of a rapidly developing septicemia. From the results one may well suspect that the immunity is related to and perhaps co-extensive with the acquired phagocytic power.

Phagocytes Take Up Virulent Bacteria.

The Influence of Serum.

But is the serum of no influence? It has often been held that phagocytes take up bacteria only after the latter have been injured or killed by the serum or plasma. Metchnikoff answers this objection experimentally by inoculating an immune rabbit with anthrax, withdrawing some of the exudate at a time when phagocytosis is complete, and injecting it into a non-immune rabbit. The second animal dies. Since none but phagocytized bacilli were injected into the non-immune rabbit, and since the latter succumbs to anthrax it seems not only unnecessary, but unjustifiable, to assume that the bacteria must be attenuated by the serum before they can be taken up by the leucocytes. May the serum, nevertheless, have some obscure action which may not be included under such terms as bactericidal and attenuating? It seems fairly well established that anti-anthrax serum, at least from certain animals, may exert a protective influence when injected into other animals in conjunction with or in advance of the culture; yet Metchnikoff discredits the importance of such protection and says that "those properties of the body fluids, as the bactericidal, preventive and agglutinating, fall away into the background in such examples of immunity." It is the tendency of the school of Metchnikoff to refer the protective power of a serum to its faculty of stimulating the phagocytes rather than to its effect on the micro-organisms. We shall see, however, in speaking of opsonins, that even in relation to anthrax the serum may possess a distinct property which facilitates phagocytosis, not by stimulating the phagocytes but by some action on the bacteria.

Cholera and Similar Infections.

Concerning those diseases in which immunity is characterized by a great increase of the bactericidal amboceptors or fixators, Metchnikoff does not disregard the existence or importance of the immune bodies, but rather seeks to establish their genetic relationship to phagocytic activity. The conditions are held to be similar to those already mentioned in connection with *intra vitam* hemolysis. That is to say, microcytase exists only in the leucocytes of the immune animal under normal conditions; it escapes into the plasma, or into the serum during coagulation, only as a consequence of the phagolysis already mentioned. The phenomenon of Pfeiffer occurs only because the injected culture injures the leucocytes, resulting in the liberation of microcytase, which in conjunction with the fixators causes the solution of the vibrio. When phagolysis is prevented by a preceding injection of bouillon, phagocytosis and intracellular solution of the organisms entirely supplant extracellular solution.

(*To be continued.*)

Clinical Reports

BRONCHOSCOPY FOR THE REMOVAL OF A COLLAR BUTTON FROM THE LUNG.*

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CHICAGO.

Patient.—C. D. H. was sent to me May 23, 1904, by Dr. F. W. Wilcox, of Minonk, Ill. He was a man 22 years of age, who had formerly weighed 142 pounds, but who then weighed 107½ pounds.

History.—He told me that 14 months previously he had accidentally drawn a collar button, presumably of vegetable ivory, into the air passages. He at once felt the sensations caused by it near the upper part of the sternum on a level with the second rib; subsequently he had some soreness in the same place. He expectorated a little blood a few minutes after the accident, and he said that there quickly appeared a peculiar squeak in the breath sounds. Pneumonia developed on the left side within 24 hours and lasted for one month. He had coughed ever since. He had sometimes felt something moving up and down in the lower portion of the trachea and a valve-like action with choking for a few seconds. His father stated afterward that the patient frequently had these choking attacks, coming on without apparent cause and without cough. The last time this sensation had been noticed was 4 months before he came to see me. He said he had been coughing continuously ever since, mostly at night. This was probably due to a change in position of the foreign body. During the summer immediately following the accident he had had an aggravation of his symptoms with daily fever in the afternoon, during which time he had been kept in bed for a week or two. His recovery from that attack had been very slow. When I first saw him he complained of occasional pain in the left side, referred to the second interspace about an inch to the left of the sternum and occupying an area about two inches in diameter. He had felt no pain in any other portion of the chest, except low down on the left side, at the time he had the attack of pneumonia. His previous history was negative. The heredity was good, there being no tuberculosis on either side of the family. He was a twin, and reported that his brother was strong and well.

Examination.—He had been much weakened by his prolonged illness, was pale and very anemic; he had dyspnea on any exertion and had some swelling of the feet. The voice was clear. I found the pulse 120, the temperature 99.6. He complained of coughing a good deal, mostly at night, and said that he raised occasionally a thin sputum of a brick-dust color, but there were only from two to four drams daily. There had occasionally been faint traces of blood in the sputum, but no distinct signs since immediately after the accident. His appetite was good, but digestion only fair;

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* Patient presented to the Chicago Laryngological and Otological Society, 1905.

bowels loose, urine normal. There were no abnormal signs in the nares, but the larynx and trachea were moderately congested. The hemoglobin was found to be only 65 per cent. The sputum contained many pneumococci and pus cells, but no tubercle bacilli.

On examination of the chest I found very little movement, with retraction of the left side. The right side, an inch below the nipple, measured from 15¼ to 15½ inches, the left from 14½ to 14¾ inches, but there was no change in the line of dullness on changing the patient's position. The patient said he had been aspirated twice about 8 months ago, but no fluid had been found. There was dullness on the left side above the second rib, except a small area between the first and second, and flatness below that level all over the lung. The resonance and respiratory murmur were exaggerated over the right side. The apex of the heart was found in the fourth interspace one-half an inch to the left of the mammillary line. On the left side there was bronchovesicular respiration in the supraclavicular region. From the clavicle to the third rib the breath sounds were very indistinct; below this they could not be heard at all. The voice sounds were exaggerated above the left clavicle and they were quite distinct as low as the second interspace; but they were somewhat feebler over the remainder of the left lung than over the right side. The vocal fremitus was absent below the third rib. The heart's action was rapid and regular and the sounds were normal. Posteriorly there was marked dullness at the left apex extending an inch and a half below the spine of the scapula, with absolute flatness below this line. The resonance and respiratory sounds were exaggerated on the right side. There was bronchovesicular breathing at the apex of the left lung, though not very intense. On forcible respiration very often breath sounds could be heard as low as the low border of the left lung.

Fluoroscopic examination showed a dense shadow all over the left side, excepting a small area in the infraclavicular region, where the shadow was less marked. I sent the patient to the Presbyterian Hospital and had a skiagraph made, but nothing could be seen, the lung being so dense that even the ribs did not cast a shadow near the root of the lungs. Three other negatives were taken with similar results.

Treatment.—On the afternoon of May 23, assisted by several of the internes, I gave the patient chloroform, and by upper bronchoscopy attempted to remove the button. Although I had previously given the patient one-sixtieth of a grain of atropin, there was still abundant secretion in the trachea and a large amount of expectoration. Indeed, he coughed practically all of the time during the operation, which lasted from the time the chloroform was started until I desisted, in all about two hours. During this time he spat up large quantities of bloody pus, which was only kept out of my eyes by placing a pane of glass between my face and the bronchoscope. The pus rendered it very difficult to see what I was doing and compelled me to swab out the passages almost continuously. After swabbing out the pus I could only get two or three seconds before he would cough again. This seemed to result from the passage of the bronchoscope into an abscess. The patient took the chloroform so badly that we were not able to keep him profoundly under it, and I frequently touched the bronchial tubes and the walls of the abscess cavity with a solution of cocain, but the amount of pus was so great that it had little effect. In the examination of the left lung I was unable to see the numerous branches of the bronchi that are usually apparent, though I followed one of the branches far down until the bronchoscope was introduced its full length, 33 cm. below the incisor teeth. I searched carefully by inspection and palpation with a small hooklet but was unable to locate the foreign body. There was considerable granulation tissue about the bifurcation of the trachea that for some time interfered seriously with the inspection, and one mass presented the appearance of a small polypus which nearly filled the bronchoscope. I had not yet been told of the peculiar choking spells and, therefore, did not have in mind anything of a polypoid nature in that region. The mass that I saw I did not dare to remove, fearing that it might be connected with the bronchus in such a way that I would open through the tube and cause a pneumothorax. During the operation a part of the time I used for removing the pus a strip of one-inch gauze, which was crowded down the bronchoscope with a large wire, the end of which had been flattened and forked, like that used in the ordinary uterine packer. This worked fairly well, but much of the time I used cotton swabs attached very securely to long brass carriers. At one time in swabbing out the pus the sliding ring for fastening the cotton on the carrier caught on the end of the bronchoscope and I had a little difficulty in disengaging it. As the swab was withdrawn I examined it and found the swab of cotton intact, but it seemed to me a little smaller than the others. However, I concluded that this was due simply to its having become saturated with pus. Some time later I discovered at the end of the bronchoscope a white mass which looked like a large swab of cotton. I grasped this with the forceps and withdrew it, thinking it must be a pledget of cotton that had been lost off at the time the instrument caught. Not wishing to direct attention to the interne who had been fastening the cotton on the carriers, and who, by the way, was one of the best men in the hospital, I simply called his attention to it by a look and threw it aside without examining it. This mass appeared fully twice as large as any of the pledgets of cotton after they had been saturated with the pus, and, considering the subsequent history, I am now confident that it consisted of the collar button surrounded with necrosed lung tissue.

Result and Subsequent History.—During the operation the patient's pulse varied from 110 to 150, but all the time was fairly full and regular. Immediately afterward he appeared to be doing well. The next day there was no temperature and the patient said he felt fine. Two days later he was discharged and went to his home in the country. Two weeks later I received a report that he was improving very rapidly, did not cough excepting a few times in the morning, had a ravenous appetite and had gained 11 pounds. A month later another report stated that he was feeling fine and had gained 22 pounds. Two weeks later he came to see me so changed in appearance that I did not know him. He coughed very little, indeed, had no pain, no dyspnea on exertion, had a ravenous appetite and weighed 130 pounds. An examination of the left chest showed only slight dullness from the second to the sixth rib, showing that the lung had cleared up greatly from the third to the sixth rib; flatness below the sixth rib, otherwise in front and laterally signs over the chest were much as at the first examination, except that the apex of the heart was found about 1¼ inches to the left of the mammary line. Posteriorly the respiratory sounds were good over the left lung as low as the eighth rib, but feeble or absent below that level. The fluoroscope still showed a shadow over the left lung, but much less dense than formerly.

In response to a letter the patient called on me recently. He said he had been working 12 hours a day since September, had no cough, no temperature, felt fine and weighed 136 pounds. Examination of the chest showed very slight diminution of resonance over the left side as low as the sixth rib in front and laterally, and as low as the eighth rib, posteriorly, with a vesicular murmur in the same region about two-thirds as intense as on the right side. The lung was somewhat contracted and the heart drawn from 1½ to 2 inches to the left of its normal position. No respiratory sounds could be heard below the eighth rib posteriorly, probably due to drawing upward of the lung and diaphragm. The normal superficial area of cardiac dullness had disappeared over the right half of the lower part of the sternum on account of the increased activity of the right lung and the dislocation of the heart to the left caused by retraction of the left lung. The patient felt perfectly well, and, considering the history, I feel justified in reporting the operation as a complete success, although I did not at the time examine critically the mass that seemed to have been causing the trouble.

34 Washington Street.

AN UNUSUAL MANIFESTATION OF MALARIA.

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The following report is submitted with the hope that it may prove of value to those who are especially interested in the study of malaria—particularly of its unusual manifestations.

Patient.—Private G., about 11 a. m., Jan. 23, 1905, complained of an extremely severe headache, which had first appeared between 9 and 10 o'clock that forenoon, and which had rapidly increased in severity until at the time he applied for treatment it had become almost unbearable. The pain was especially severe in the temporal regions. The man further stated that previous to that morning he had been in his usual good health.

Examination.—The patient was admitted to the hospital; the temperature was normal. He was carefully questioned with regard to his appetite, digestion and action of his bowels, and all seemed to be perfectly normal. He felt certain that he had eaten nothing unusual or which might have given rise to some digestive disturbance. Nothing abnormal was revealed on examination.

Treatment.—The patient was put to bed and his bowels thoroughly evacuated by means of purgatives and enemata. A cold compress was applied to his head and his diet was restricted to liquids. By 3 p. m. on the day of admission his headache had practically disappeared, and by 6 p. m. he felt quite as well as usual.

Subsequent History.—On the morning of January 24 the patient felt quite well until about 9 o'clock. At that time his headache reappeared and gradually increased in severity until, according to his statement, it was even worse than on the preceding day. His temperature remained normal. He was carefully questioned at this time in order to determine whether or not there was a possibility that his headache might be of malarial origin. He stated that he had been born and raised near Altoona, Pa., and had never been any farther south than West Point, Ky. He was positive that he had never suffered from malaria, "ague," "chills and fever," or any disease of that nature whatsoever. He further stated that he had never, at any time during his life, been in the immediate neighborhood of cases of malaria, ague, etc., occurring in other people. In view of the patient's positive statements, together with an entire absence of temperature, and especially in consideration of the fact that the patient's disability had arisen in the very midst of an Alaskan winter, in a section of the country where, even in its warmest season, malaria is practically unknown, the idea of a blood examination seemed so utterly futile that it was dismissed without further thought.

During the succeeding five days, January 24 to 28 inclusive, the patient's headache continued, usually coming on between 9 and 10 o'clock a. m., and disappearing about 3 p. m. On some days it seemed to be less severe than on others.

Further Treatment.—Various combinations of drugs, including sodium bicarbonate, calomel, bromids, chloral, coal-tar preparations, etc., were faithfully tried, but with little or no result. Cold applications to the head sometimes seemed to give slight relief, but at best it was only temporary.

Finally at 8:30 a. m. on January 29, 1.3 gm. quinin sulphate was administered in capsules. The headache appeared as usual, between 9 and 10 a. m., but as time went on, contrary to custom, the aching seemed to be much less severe than usual.

Blood Examination.—Noting this change, at about 11:30 a. m. I proceeded to make a blood examination, which I should have done before, and certainly would have done had it not been for the apparently absolutely contradictory evidence. On taking a slide of the patient's blood and examining it under the microscope I found it to be fairly swarming with malarial spores, which resembled in appearance those of the tertian parasite. The examination, however, had been too long delayed, as prolonged and careful search failed to reveal any mature or segmenting parasites, hence it is impossible to say with certainty which variety of malarial parasite was responsible for the trouble.

Results.—On the whole, the headache on this day (January 29) was much less severe than usual. Two small doses of quinin were given during the day, and on the following morning at 8:30 another large dose of 1.3 gm. was administered.

On the morning of January 30 a very slight headache appeared about 10 o'clock. The blood was again carefully examined at this time, but nothing was found save a few scattered spores. The headache on this day was slight, and had practically disappeared by noon. The quinin was continued up to and including another large dose on the morning of January 31, after which, inasmuch as the patient experienced no pain on that date, it was stopped. From that time until the present the patient has experienced no recurrence of the headache.

It is extremely to be regretted that a thorough blood examination was not made much earlier in this case, but, as stated above, the bare possibility of malarial infection seemed so vague and remote that the examination of a blood specimen seemed an absolutely useless procedure. However, if the above report fulfills no other mission, it may at least serve to warn us against neglecting to follow up every possible diagnostic clue, however useless and insignificant it may seem.

HEMIPLEGIA OCCURRING DURING THE THIRD WEEK OF TYPHOID FEVER.*

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PITTSBURG.

In the *Medical Record*, Dec. 19, 1903, I reported a case of sudden hemiplegia with aphasia occurring during the fourth week of an attack of typhoid fever in a boy aged five years, and I also referred to several other reported cases. Inasmuch as this complication of typhoid fever seems to be a rare one, I have though it worth while to briefly record the clinical notes of a second case which has since come under my observation.

Patient.—A married man, aged 38, a bricklayer, habits good, previous history not significant.

History.—The patient was in the fourth week of a simple uncomplicated attack of typhoid fever, when on Aug. 9, 1904, he developed the hemiplegia to be described. His physician saw him at 5 p. m. on the date mentioned, and noted nothing unusual. He saw the patient again at 9 p. m. the same day, when he found that he was suffering from a complete left hemiplegia. It must have developed gradually and without loss of consciousness, as a member of the family was in constant attendance on the patient and noticed nothing unusual until an attempt to move the patient between 8 and 9 o'clock revealed the hemiplegia described.

Examination.—An examination which I made the next day revealed a complete left hemiplegia, with exaggerated tendon reflexes on the affected side and some mental confusion and thickness of speech. The heart and arteries seemed normal.

Course of the Disease.—The hemiplegia persisted for four months (the patient in the meanwhile had recovered from the typhoid fever) and then began to improve, and has continued to do so slowly up to the present time. He can now move the affected arm and leg pretty freely, but a considerable degree of paralysis persists, together with spasticity.

I am inclined to regard this hemiplegia as of thrombotic origin.

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* Reported at a meeting of the Pittsburg Academy of Medicine, 1905.

We Are Surfeited with Surgeons.—The present "rage" in medicine is surgery, surgery. The fledgling, barely able to diagnosticate a case of chronic constipation, wants to be a "surgeon." The hospital interne, after a year or so in hospital service, wants to be an abdominal surgeon. The young medical man, after graduating, seeks a position in the surgical clinic, and after dressing chronic ulcers for a year or two, modestly classifies himself in the medical city directory as a "surgeon." Enough of this inane desire.—*Med. Fortnightly.*

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SPOTTED FEVER.

For twenty years there has existed in the Bitter Root Valley in Montana a peculiar febrile disease known as spotted fever. It is not confined to the Bitter Root Valley, for cases have been observed in the valley of the Snake river in Idaho, in the valley of the Quinn river in Nevada, and in certain parts of Wyoming. Probably on account of its purely local character, the disease has received but little attention until the last few years, and it was not until 1902 that the work of Wilson and Chowning brought it into prominence. The claims of these authors that the disease is due to a peculiar animal parasite similar to that of Texas fever in cattle, and like it transmitted by insects, focused the attention of the profession on the condition.

In its clinical aspects, this condition suggests in some ways typhus fever, and in others epidemic cerebrospinal meningitis. It differs from the former disease in its lack of contagiousness, and from the latter in the comparatively slight involvement of the central nervous system. It is essentially a seasonal disease occurring almost exclusively in the spring and early summer. After an incubation period of from three to ten days the symptoms appear. At first they are very similar to those of any febrile disorder, chilly sensations or a chill followed by headache, bone and muscle pains, and nausea. As the disease progresses, nosebleed and slight bronchitis may occur, suggesting typhoid fever. The fever gradually rises, with evening exacerbations, and reaches its maximum from the eighth to the twelfth day. At this time the evening temperature may reach 105 or even 107 F.; after this, it falls by lysis, or in fatal cases remains high to the end. The eruption, which is very characteristic and gives the disease its name, appears in most cases about the third day. It is noticed first on the wrists, arms, and legs, later on the forehead, back, and chest, and last on the abdomen. At first, it takes the form of bright red macules from one to five millimeters in diameter, later these assume a purplish hue, and finally definite petechiæ are evident. Slight icterus is usually present, and desquamation may occur in the third week. With these symptoms, there is enlargement of the liver and spleen, scanty urine with albumin and casts, and, in some cases, a slight leucocytosis with increase in the large mononuclear elements. In fatal cases, the changes in the internal organs are those usually found in febrile conditions, cloudy swelling of the parenchymatous organs, submucous and interstitial hemorrhages, fatty liver, and swelling of the spleen. The intestines and lymphatic apparatus present no marked abnormality.

The main interest in the disease centers in its etiology. It would seem likely *a priori* that so sharply localized a disease would have a special causal agent. Such, indeed, were the conclusions of Wilson and Chowning, who stated that the blood contained a piroplasma which they named *Piroplasma hominis.* They claimed, further, that this organism is transmitted by the bite of a tick, and that the gopher acts as an intermediate host. In support of this view, they cited the seasonal incidence of the disease, this, according to them, corresponding to the seasonal incidence of the tick, the history of tick bites in all cases, and the presence of the causal agent in the blood of the gopher. Some months ago, Craig threw doubt on the blood findings, claiming that the appearances described as parasites are merely artefacts, and Stiles also was unable to confirm their observations. Recently Ashburn[1] has published the results of his observations, made with Stiles, on the cases which occurred in 1904. The results seem to indicate quite definitely that the etiology of this strange disease is as obscure as ever. Careful observation of the blood of eleven cases failed to disclose the organism described by Wilson and Chowning, nor was any other organism, bacterial or protozoan, discovered. The work of 1904 has also disclosed several other interesting facts regarding the disease. It has shown that not all those infected have been bitten with ticks, that in the Bitter Root Valley only the mesa on the west bank is infected, and that the nervous system can be quite markedly infected so far as the clinical symptoms are concerned. Pathologically, however, gross nervous lesions are not apparent, and it is still evident that the condition is not a form of epidemic meningitis.

Further investigation is of great importance, not only from a scientific but also from an economic point of view. The tick theory of the disease seems to have reduced the inhabitants almost to a state of panic, and it is to be hoped that the disease will be reinvestigated this season if only to reassure them and to render the development of this fertile valley practicable.

THE TREATMENT OF THE EPILEPTIC STATUS.

At best, epilepsy must be considered as merely a symptom-complex of which, as a rule, the underlying causes elude detection. The disorder must be looked on as the expression of a convulsive neurosis in which an abnormally irritable nervous system responds with undue readiness to varied stimuli. In accordance with this view, the therapeutic indications are, on the one hand, to diminish the irritability of the nervous system and, on the other hand, to remove and to avoid all possible exciting factors. The results of treatment will depend on the success with which these indications can be met, but no case should be despaired of and no effort be spared to attain the desired end. Drugs will at times subserve a most useful purpose in this connection, but the greatest good will be accomplished by a regulation of the diet and a simplification of the mode of life. Each case must be considered by itself and will receive treatment in accordance with its individual requirements.

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[1] The Lancet-Clinic, vol. liv, No. 17.

One of the most serious phases of epilepsy with which the physician is called on to deal is the condition known as the epileptic status and consisting in a succession of convulsive attacks of which one begins before the preceding one has terminated. Some of the measures to be adopted with the object of preventing such outbreaks and of mitigating their severity when they occur are discussed by Dr. Konrad Alt.[1] on the basis of a considerable experience in an institution for the care of epileptics. As gastrointestinal disorders, especially constipation, often act as determining causes of the convulsive seizures, the closest attention should be given to the quantity and the quality of the food and the state of the digestive organs and their activities. As alcohol increases the irritability of the nervous system, it should be scrupulously avoided by the subjects of epilepsy. The same statement is applicable in modified degree to the use of morphin, emotional disturbances of varied kind, including sexual excesses, and exposure to the sun's rays.

Perhaps next in importance to gastrointestinal disorders as a factor in exciting the epileptic status is abrupt withdrawal of the bromids. The prophylaxis under such conditions is obvious and the treatment consists in the administration of large doses of the bromids by mouth or by rectum. The employment of iodids in the treatment of epilepsy, alone or in combination with the bromids, and whether a history of syphilis be present or not, is occasionally attended with an increase in motor irritability and the development of the epileptic status. Under such circumstances the iodids should be replaced by bromids, gradually or suddenly as the exigencies of the case may demand. Organic disease of the nervous system may act as the cause of the status and it should receive appropriate treatment. Attacks of epilepsy appear at times to be inhibited during and subsequent to the course of an acute febrile disease, later to reappear suddenly in the form of status. On the other hand, long-continued improvement with respect to the seizures has repeatedly been observed after attacks of erysipelas.

Death may occur during the convulsive stage of the status as a result of asphyxia from spasm of the respiratory muscles or from the entrance of particles of food into the larynx or bronchi. Aspiration pneumonia also may develop from the latter cause. Cerebral hemorrhage may occur from rupture of an artery in the brain and hypostatic pneumonia may be a secondary result. Hemorrhages may take place likewise into other organs, namely, kidneys, heart and liver, and lead to a fatal termination. Accordingly, the seizure should be brought to an end as speedily as possible. The patient should be shielded from light and noise and a high enema be given. Should these measures not suffice, resort may be had, with caution, to sedatives, such as bromid, chloral, amylene, dormiol, and opium, administered, preferably, by the rectum and fortified by tincture of strophanthus, or one may use chloroform by inhalation, guarded perhaps by the conjoint administration of oxygen. When the temperature is high, a prolonged cold bath or a cold douche may be given. When symptoms of general intoxication are present, venesection may be done, with or without saline infusion. Hypodermoclysis or enteroclysis may be employed independently of blood-letting, and nutrient enemata may be given to avert wasting. It seems probable that the treatment outlined in the foregoing will prove applicable also to the eclamptic status of pregnant women, and of children.

THE EFFECTS OF TROPICAL LIGHT ON WHITE MEN.

The closer one gets to nature, and the more intimately one studies her processes, the more one becomes convinced that there is law and order, not to say volition and intelligence, in all her varied phenomena. Observation has shown that individuals thrive best and attain their highest perfection when most nearly adapted to their environment. In the process of evolution gradual changes take place in response to the tendency to readjustment that is constantly present. It is in conformity with this doctrine that the dark races preponderate in the tropics and the less pigmented peoples in the temperate and arctic zones. It has been thought that this distribution is related to the intensity of the heat in different parts of the world, but sufficient evidence has been accumulated to show that other factors also are at work in this connection. One of the most important of these, there is now good reason for believing, is light, representing merely another mode of motion in the corpuscles of which all matter is constituted.

Ether waves of a certain length and frequency give rise to heat, while below and above these are, on the one hand, the so-called Hertzian and infra-red rays, and, on the other hand, the actinic rays, the *x*-rays, and the radium rays. The effects of the longer, heat rays, are pretty well understood, but those of the shorter, light rays, have only recently been given the consideration to which their importance would seem to entitle them. The subject is quite fully discussed in a monograph by Major Charles E. Woodruff,[1] Surgeon United States Army, who puts forward evidence in support of the theory propounded by von Schmaedel to the effect that pigmentation of the skin in man has been evolved for the purpose of excluding the dangerous actinic or short rays of light, which have been found to be so destructive to living protoplasm. Dr. Woodruff shows that plants and animals are essentially identical, the protoplasm of each reacting in accordance with the conditions by which it is surrounded, the one representing merely a more advanced stage in the process of evolution. Both are provided with mechanisms, largely in the form of pigment, for affording protection against the deleterious effects of light, particularly the actinic or short rays. It is admitted that a certain modicum of light is necessary for the continuance of life, exercising a beneficial stimulation on all of the bodily functions, while an excess is exhausting and injurious. The latter-mentioned effects can be observed both in the tropics and in arctic regions.

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[1] Muenchener med. Wochschft., March 28, 1905, p. 585.

[1] The Effects of Tropical Light on White Men. New York: Rebman and Company, 1905.

Woodruff believes that the first men were brunette, though not black, their evolution taking place in a cold and light climate. Blondness appeared later, in cold and dark countries. The transition takes place gradually when the migration from one environment to another is sufficiently slow to permit of adaptation and readjustment to the new conditions, while rapid and radical change in surroundings is more likely to result in extinction. Hybrids do not thrive and are generally sterile, the principal reason perhaps residing in the fact that they are ill-adapted to any environment. Every race flourishes best in the climate for which it is most nearly adjusted.

Applying the foregoing considerations to the occupancy of the Philippines by the United States. Dr. Woodruff declares that acclimatization is, strictly speaking, not possible. Certain precautions, therefore, must be taken by white men compelled to live for longer or shorter periods in tropical climates. He recommends that the clothing worn during the day should be opaque to the shorter light waves. This end is best attained by wearing black or yellow underclothing. At the same time, the outer garment should be of a color that reflects heat in as large a degree as possible, namely, white, gray or yellow, if the wearer is to be exposed to the direct rays of the sun; black or dark blue is more serviceable for those not thus exposed. The hat should have a wide brim and should be thick enough to exclude all the sun's rays. It has been suggested additionally that the helmet be lined with tinfoil. The hair should be permitted to grow to a considerable length. Umbrellas should be carried by those who must go in the sun and are not on military duty. Houses should be provided with large verandas whose roofs come well down, in order that they may be kept dark. They should preferably be painted some shade of green, yellow or brown. Shade trees subserve not merely an ornamental purpose, but they are actually urgently necessary in the tropics. Whenever possible, the use of tents should be dispensed with in the tropics, wooden shelters being preferable when houses are not available. The midday sun especially is to be avoided. Work should be stopped largely between the hours of 11:30 a. m. and 3:30 p. m. and rest and sleep at this time should be encouraged. Women should not be out of doors between the hours of 9 a. m. and 4 p. m. When possible, drills, schools, sports, maneuvers and examinations should be suspended during the summer. The diet should be liberal and should include fresh meat. Civil officials who have been rendered unfit for labor by service in the tropics should be retired or pensioned. White employes presenting signs of breakdown should be transferred to home stations at once.

From the foregoing it will be seen that in the tropics the white man is confronted with many problems whose solution will be aided by observations and reflections such as those recorded by Major Woodruff and for which he, as well as the service he represents, deserves the fullest measure of credit.

WHAT IS THE CYCLASTER SCARLATINALIS OF MALLORY?

In the autumn of 1903 Mallory described certain protozoon-like bodies which he found in the skin of four bodies that had died of scarlet fever. These structures varied in size from 2 to 6 microns or more in diameter and were found in the epithelial cells of the epidermis, between these cells, and also in the superficial lymph vessels. For the sake of convenience in description they were divided into two groups. The members of the first group consist of small, round, oval, elongated or lobulated bodies, while those of the second group are characterized by a radiate structure forming a rosette from 2 to 6 microns in diameter. The rosettes are spherical in shape and contain a central round body around which are grouped from 10 to 18 narrow segments. These structures are not uniformly distributed in the skin, but appear to be found in groups. The skin from a number of other scarlet-fever bodies was examined, but gave negative results. In all of these cases the skin had been taken a number of hours after death, but skin was also taken from four patients during life and examined for the bodies and gave negative results.

From the fact that these structures form a fairly definite series of bodies of a distinct morphology, which may be compared with the cycle of asexual development of the malarial organism, they were looked on as protozoa. If they are protozoa Mallory concluded that they have a causal relation to scarlet fever because they have not been encountered in normal skin nor in the skin of smallpox patients which has been carefully examined by Councilman and his co-workers. He proposed for them the name of cyclaster scarlatinalis because many of the rosettes are either wheel or star-shaped.

In the autumn of 1904 the work of Mallory was verified by Duval[1] by the discovery of protozoon-like bodies in the blister fluid in the skin (and in the skin) of scarlet-fever patients during the height of the rash. In all 18 cases were studied, but the bodies were found only in the last five. These bodies resemble closely those described by Mallory, except that a larger variety of shapes were seen, necessitating the formation of five groups. They vary in size and shape from small. oval bodies 1 to 2 microns in diameter to large rosettes 4 to 6 microns or more in diameter. Many intermediate stages could be made out, suggesting the developmental cycle of a protozoon. Ameboid forms also are not uncommon. Duval believes these bodies to be identical with those described by Mallory in the skin, and although they have not been grown on artificial media he believes them to be protozoa which have a causal relation to scarlet fever.

This question of scarlet-fever protozoa has also been studied by Field[2] of New York. Field was able to verify the work of Mallory and of Duval, but found the bodies in the skin and blister fluid of measles patients as well as in those of scarlet-fever patients. A number of pieces of skin were removed during life, at the height of the rash, but none of them contained any protozoa. This fact suggested to Field that these bodies may be the products of degenerating cells and their nuclei. He accordingly studied the degeneration products of leucocytes and other cells suspended in serum, and found there bodies which closely resembled those described by Duval in the blister fluids. All the different forms, such as rosettes and the individual segments, could be made out in these preparations. Field concludes, therefore, that a large per cent., at least, of the bodies found in the blister fluid from scarlet-fever and measles patients are not protozoa but simply degeneration products of leucocytes and other cells. This question is, however, far from being settled and any additional light that can be thrown on it will be gladly welcomed by those who are interested in the etiology of scarlet fever.

PERICOLITIS SINISTRA.

The term pericolitis sinistra has been employed to describe a condition that is considered comparable with appendicitis, except that it occurs on the left instead of on the right side. Strictly speaking, the disorder more nearly resembles perityphlitis, as it is the peritoneum that is more especially involved. In its simplest form, the morbid process exists as a localized peritonitis surrounding the descending colon or sigmoid flexure. Suppuration may take place, with the formation of an abscess which may rupture into the peritoneal cavity, with the development of general peritonitis. The distinctive symptoms are constipation of some duration, with pain in the left iliac fossa, usually elevation of temperature and at times vomiting. Palpation discloses deep tenderness, muscular resistance and a more or less cylindrical tumor in the left iliac fossa. Leucocytosis and indicanuria have been observed in some cases. The treatment consists in the administration of enemata and castor oil, and the early application of an ice bag and later of hot poultices. In the presence of an abscess, the abdomen should be opened, the pus evacuated and drainage provided for. Cases illustrative of the several phases of the affection are reported by Dr. H. D. Rolleston.[1]

TOO FEW PHYSICIANS? HARDLY!

A dean of a medical college is reported to have prophesied recently that under the present more rigid requirements, both in medical education and in state licensure, there will soon be a shortage of physicians in this country. In support of this view he points out a falling off in the first year enrollments in certain medical colleges and claims that it indicates a coming deficiency and that the supply will not offset the depletion of practitioners caused by death and disability. We are uninformed whether his remarks were intended as a jeremiad or as offering matter for congratulation to his hearers. We see no reason to regret a decrease in the annual output of physicians providing the lessened quantity is in inverse ratio to the quality of the product, as we believe is the tendency at the present time. There would have to be a very rapid falling off in the output of medical graduates to make it seriously felt by the profession for a score of years to come, and there is little reason to fear any undesirable falling off in the supply of undergraduates in the really high-class institutions of the country. If the effect would be to reduce the number of medical colleges by one-half it would not be a matter for serious regret. This country has been suffering from what might properly be called a surfeit of medical education, and the medical profession in general has not been the least sufferer from this cause. The prophecy is one of better things and it is to be hoped it will be realized. But, judging from the reports covering college statistics for 1904-5 thus far received, it looks as though instead of a decrease of the number of graduates there will be an increase.

CENSORSHIP WANTED.

Two or three years ago we noticed the allegation of an eclectic doctor in Connecticut that he was employing therapeutically certain recently discovered elements found in infinitesimal quantities in the atmosphere and elsewhere. As a rather queer statement this could only be interpreted as an attempted imposition on the presumed ignorance of his hearers. Now comes another smart fellow from the same quarter and of the same school of practice, who gives out the remarkable utterance that smallpox is not contagious. At least, this is the newspaper statement of his remarks as reported for the committee on contagion and infection to the Connecticut Eclectic Medical Association. Of course, he opposed vaccination and probably will be quoted by the antivaccinationists as another of the eminent physicians who uphold their cause. The Connecticut Eclectic Association certainly ought to sit down hard on some of its members.

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[1] Univ. of Penn. Med. Bull., December, 1904. Virchow's Archiv, 1905, vol. clxxix, p. 485.

[2] Read before the American Association of Pathologists and Bacteriologists, Chicago, April 21, 1905.

[1] Lancet, April 1, 1905, p. 854.

THE VIBRATING SENSATION.

It has been observed that under normal conditions the vibration of a tuning fork applied to various subcutaneous bony prominences and surfaces is appreciable at the point of application and throughout the extent of the bone. The sensation is said to be always present in health and usually absent when other forms of sensation are lost as a result of disease of the nervous system. It may be absent, also, in cases of tabes dorsalis when tactile and thermal sensibility are preserved. In this connection, Dr. R. T. Williamson[1] reports the results of a series of observations on persons in health and suffering from divers disorders. He studied 50 healthy persons, 80 suffering from various diseases of the nervous system, 45 suffering from diabetes mellitus, and 75 suffering from other diseases (heart, lungs, abdominal viscera, blood). He was able to confirm the constant presence of the vibrating sensation under normal conditions. In some cases of tabes it was absent in the legs before impairment of other forms of sensibility appeared and before ataxia or Romberg's symptom could be detected. In three cases of spinal paraplegia it was lost in the legs when other forms of sensibility were not affected. In a considerable proportion of cases of diabetes mellitus and of chronic glycosuria it was enfeebled or lost when sensation in other respects was normal. The conclusion is accordingly reached that sensibility can not be declared normal until the vibrating sensation has been tested. In making the observations a tuning fork six inches long was employed, and it was applied to the styloid process of the ulna, the internal malleolus, the inner surface and the anterior edge of the tibia at about its middle, the anterior superior spine of the ilium and the middle of the sternum.

DANGER OF SMALLPOX HOSPITALS.

We recently[2] directed attention to reports from two European cities with reference to the influence of smallpox hospitals in spreading the disease among persons living in their neighborhood. Since these reports were made there has been published the report of the chief of the Bureau of Health of Philadelphia, which shows that, notwithstanding every effort to prevent it, the Municipal Hospital of that city proved a most important focus for the dissemination of the disease. Between June 1 and Dec. 26, 1903, the smallpox morbidity per 10,000 of population in the municipal ward in which the hospital is located was 42.5, while in three immediately contiguous wards it was 18.4, 25.4 and 14.6, respectively. There was a marked decrease in the rate in more remote districts. These facts emphasize the need of isolation hospitals in fact as well as in name. Isolation of the patient is not sufficient—the place of isolation itself must be isolated. Smallpox hospitals ought to be erected in outlying districts sufficiently removed from populated districts to eliminate them as a factor in the spread of the disease.

INTRAPELVIC EXTRAVASATION OF URINE.

Extravasation of urine is usually due to injury of the urethra in its bulbous or membranous portion, and the fluid, by reason of the anatomic relations, finds its way into the perineal space, the scrotum, the penis and the connective tissue of the anterior abdominal wall. Rarely, the lesion occurs further back in the urethra, so that the urine is prevented from passing forward, but is forced to escape into the connective tissue of the pelvis. The latter condition is difficult of recognition and may readily be overlooked in the absence of operation. An illustrative case has recently been reported by Dr. David Lowson.[1] A man received an injury to the perineum by being thrown from a horse, which fell on him. He complained of much pain in the back in the left side of the pelvis and groin. There was little shock and no symptom of internal injury. After a restless night a small amount of blood and urine was removed by means of a catheter introduced as far as possible. Later in the day, only a small amount of blood was obtained in the same way. The patient thought he had previously passed urine freely while in a bath. There was no swelling of the perineum or scrotum, or other indication of urinary extravasation in the usual situation. Above the pubes, however, there was a large, tense, semi-elastic, globular tumor, dull on percussion, tender to touch and extending upward toward the umbilicus. Pressure was followed by an immediate desire to urinate. Attempts to introduce an instrument into the bladder failed, the tip always deviating to the right on reaching the deep urethra and entering a space in which it had considerable freedom of movement on rotation. Operation having been decided on, an incision was made in the median line above the symphysis and a stream of dark blood and urine spurted forth. The source of the fluid was found to be an artificial channel hollowed out of the connective tissue and communicating with a reservoir deep in the pelvis. Further exploration disclosed a large cavity to the right of the neck of the bladder, from which a pint and a half of fluid was sponged out. The bladder was uninjured. The ischial or pubic ramus was denuded of all covering but no line of fracture could be discovered. As bleeding continued, the cavity was packed with aseptic sponges. A small opening was made in the bladder and, with the finger inside, a catheter was gradually passed through the urethra into the bladder and tied in position. A piece of India-rubber tubing just fitting the vesical opening conveyed the urine to a receptacle by the side of the patient. The wound was then partially closed and dressed. The catheter was removed from the bladder and the tube from the vesical wound on the ninth day. A small abscess formed in the abdominal wall close to the incision and had to be evacuated on the eleventh day. The patient was convalescent nine weeks after the accident and free from all urethral trouble.

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[1] Lancet, April 1, 1905, p. 855.

[2] The Journal, April 22, p. 1287, and May 6, p. 1453.

[1] Lancet, March 25, 1905, p. 790.

THE DISREPUTE OF EXPERT MEDICAL TESTIMONY.

This subject is not new, but its vexing perplexities press for solution with increasing insistence. So long as the medical profession includes members who are willing to testify in court to manifest absurdities, or untruths, just so long will expert medical testimony deserve the sneer it so often receives from the public, the press and the legal profession. In a recent trial a man was convicted of murdering his wife by giving her arsenic. There was no direct proof of the crime, but the accused carried a bottle of powdered arsenic in his pocket, the wife who had previously been healthy died rather suddenly of an ailment with symptoms resembling those of arsenical poisoning, her stomach and other organs were found postmortem to contain quantities of arsenic, and it was proved that there was no arsenic in the embalming fluid used. A member in good standing of a representative medical society is reported by the newspapers to have sworn that eight grains of arsenic might be found in the stomach after the body had been buried for a week or so, averring that arsenic which had found its way into the soil from embalming fluids used in other bodies that had been buried might penetrate the interred body during this brief space of time. No proof was offered that the soil of the graveyard contained even traces of arsenic. It is such evidence as is here referred to that has made so-called medical expert testimony an opprobrium to medicine and too often worthless to the courts of justice. Is it not time for our medical societies to take up this matter in earnest?

ABOLISH THE HOSPITAL GRAFTER.

In the May 13 issue of *Charities*—the journal of the Charity Organization Society of New York City—appears a letter from Dr. John Joseph Nutt of that city concerning a topic vital to the interests of the medical profession—the abuse of hospitals and dispensaries. Dr. Nutt writes that physicians give liberally of service and money to charity, and that few of them think it wise to state frankly their opinions on this subject for fear of loss of favor with hospital boards. He very aptly draws a sharp distinction between the public and the semi-public hospital. The former is strictly eleemosynary and is rigidly avoided by the "hospital grafter" (if we may be pardoned for coining the term), while the latter is largely patronized by those able to pay something for medicines, nursing, and medical attention at home. These thrifty ones enter the hospital by means of a letter from a member of the "board" or from some minister or capitalist. The present deficiency in hospital finances would disappear, Dr. Nutt says, if the undeserving were excluded, and there is reason to believe that he is not far astray. The responsibility for the present ill status he lays largely on the physicians themselves, and few will dispute him. In these matters we seem ever ready to sell our brother's inheritance—the right of our professional colleagues to earn a living—for a mess of pottage—to wit, a hospital appointment, or ample clinical material. Experience shows that, as a rule, it is useless to expect physicians holding hospital appointments to make serious effort to combat this evil. Nearly always the members of the staff treat whomever is admitted, without asking embarrassing questions that might lead to an interview with the fearsome "board." So Dr. Nutt proposes a commission to examine minutely into the financial standing of every hospital patient, and as a chief remedy urges the total separation of medical charities from paid medical service. The suggestion is excellent but it can be executed only through one agency, that is, by the active intervention of the organized profession. When the medical societies take hold of this problem in earnest it will be solved. Recently we recorded the fact that a first step is being made in this direction by the Academy of Medicine of Cleveland. When the profession is ready, the societies will appoint committees that will mitigate the evil, and let us hope that we soon shall be ready. There must be an effective organization to investigate the circumstances of every person who offers himself or herself as a "charity" patient. Then let us apply the remedy, absolute segregation of charity patients from pay patients. Those who really have no means will perforce go to the genuine charity hospitals, while few of those who have any income will sink their pride so far as to enter an institution patronized by none but the destitute. When the only alternative is a "pay" hospital where none are treated free, the deed is done. So long as rich and poor are treated under one roof, the well-to-do will not scruple at getting free treatment if they can, as no stigma attaches to residence in an institution where many pay their way. It may be found that this remedy will apply only in the large cities, but other and just as effective measures of reform can be used in smaller places.

Dr. Murphy's Illustrations: In some copies of this issue, Figs. 17 and 19, on pages 1673 and 1674, were printed upside down before error was discovered.

Medical News

ILLINOIS.

Smallpox at Arcola.—An outbreak of smallpox is reported at Arcola, and an inspector of the State Board of Health has been sent there with instructions to see that adequate precautions against the spread of the disease are observed.

Children's Hospital Ready.—The new Cook County Hospital for Children, erected at a cost of $80,000, was formally opened for inspection May 23. The president of the Board of County Commissioners and the warden of the hospital made short addresses.

Personal.—Dr. W. C. Blankmeyer has been appointed bacteriologist of the State Board of Health.——Dr. August R. Reder, Aurora, has been appointed surgeon for the Burlington System.——Dr. Herman A. Brennecke has succeeded the late Dr. Courtney L. Smith as surgeon for the Chicago and Northwestern Railway at Aurora.——Dr. Henry Hatch, Quincy, who has been seriously ill, is reported to be improving.

Carroll County Frowns on Advertising.—The Carroll County Medical Society, at its meeting in Savanna May 16, passed a resolution that the members of the society refrain from newspaper advertising or notice and that each offense shall be considered a breach of good faith to the society and shall be deemed unprofessional conduct, subject to the penalties laid down in the by-laws and regulations of the society.

Injudicious Economy.—The governor has vetoed the Glackin bill appropriating $25,000 for the establishment of a sanitarium for tuberculosis. He has also reduced the appropriations for state institutions as follows: Illinois Northern

Hospital for the Insane, Elgin, $49.550; Illinois Eastern Hospital for the Insane, Kankakee, $45.000; Illinois Central Hospital for the Insane, Jacksonville, $10,000; Illinois Southern Hospital for the Insane, Anna, $49,000; Illinois Western Hospital for the Insane, Watertown, $30.000, and Illinois Hospital for the Incurable Insane, Bartonville, $293,000.

Chicago.

Only One Death From Typhoid.—One solitary death from typhoid fever in a population of nearly two millions is the notable feature of Chicago's health during the week ended May 20.

Reception to Dr. Stevenson.—A large reception was given by Mrs. Theodore P. Shonts, May 11, at the Virginia Hotel, in honor of Dr. Sarah Hackett Stevenson and in celebration of her return to social life after a serious illness.

The Week's Deaths.—The total deaths from all causes for the week ended May 20 were 539, 89 more than for the previous week and 56 more than for the corresponding week of 1904. Pneumonia again led, with 70 deaths, followed by consumption, with 58; heart disease, with 53; nephritis, with 46, and violence, with 45.

Personal.—Dr. Walter A. Jaquith has resigned the chair of physical diagnosis at the Postgraduate Medical School, as he has received an appointment to the home office medical staff of the Prudential Insurance Company. The Prudential Medical Examiners' Association gave a dinner in Dr. Jaquith's honor May 23.——Dr. C. G. Dwight has been elected professor of otology, rhinology and laryngology in the Chicago Eye, Ear, Nose and Throat College.

Decrease of Mortality.—Study of the decreasing mortality in Chicago during the last ten years, compared with the immediately preceding decade, corroborates the assertion made by the Department of Health that the greatest decreases are among diseases over which sanitary administration and preventive medicine have greatest and most direct control. The decrease is in no wise connected with the climate of Chicago, to which it is so often attributed by those compelled to take cognizance of the fact, nor to any occult or mysterious agency.

INDIANA.

Gifts to Hospitals.—As a result of the second annual "tag day" in South Bend, May 6, $1,987.45 was collected, which will be divided between the St. Joseph and the Epworth hospitals.——Mrs. J. M. Gaar and Mrs. Jennie Leeds have given $1,000 to equip the operating room in the Reid Memorial Hospital, Richmond.——It is announced that $4,750 of the $7,000 required to purchase the Columbus City Hospital has been subscribed.

MARYLAND.

Personal.—Dr. Maximus Whitehill, Unionville. Frederick County, has been appointed by the governor president of the State Board of Immigration.

Typhoid in Institute.—Typhoid fever has broken out at the Jacob Tome Institute, Port Deposit, and many of the students have gone to their homes. There are eight cases.

Hospital for Colored People.—The colored people of Frederick have organized a hospital association and will purchase a building to be converted into a hospital for their race.

Smallpox.—A case of smallpox, which developed in a woman attending the Seventh-Day Adventist Convention, now meeting near Washington, was traced to Montgomery County, and the health officer of the state has ordered an investigation.

Election.—The ninth annual meeting of the Baltimore County Medical Association was held at Towson, May 18. The following officers were elected: President, Dr. George H. Hocking, Govans; vice-president, Dr. Harry S. Jarrett, Towson; recording secretary, Dr. Harry A. Naylor, Baltimore; corresponding secretary, Dr. R. C. Massenburg, Towson, and treasurer, Dr. Benjamin Whiteley, Catonsville.

Merger of Hospitals.—Through the good offices of the governor, a movement is on foot for the merging of the two hospitals at Frederick (the Frederick City and the Emergency Hospital) into one, to be called the "Union Hospital." A petition signed by a number of physicians has been submitted to the Frederick City Hospital and to the Frederick County Medical Society. which controls the other institution, asking each to appoint a member, who with a third, to be selected by the two. shall constitute a board of managers to arrange for consolidation. It is proposed that the board thus appointed shall have charge of the finances and general management and appoint the medical staff.

Baltimore.

Vital Statistics.—There were only 168 deaths last week, an unusually low number, equivalent to an annual death rate per 1,000 of only 15.50, being for whites 13.45, and for colored 26.60. The decrease in pneumonia cases was especially striking.

Personal.—Dr. William H. Welch sails for Europe, May 27, to be gone until September.——Dr. Thomas Opie, who has been dean of the College of Physicians and Surgeons ever since its foundation in 1872, has resigned that office as also the professorship of gynecology, and has been made professor emeritus. Dr. Charles F. Bevan has been made dean.——Dr. Howard A. Kelly sailed, May 23, for England.

The Passing of Osler.—Among the events characterizing Dr. Osler's last days here were a tea given him by the alumni of the Johns Hopkins Training School, at which nearly 175 nurses, some from other cities, were present. A dinner also was given to him and Dr. Barker at the Maryland Club by the advisory board of the medical faculty, consisting of the heads of all the departments of the medical school. The house which Osler occupied is being dismantled, and will be pulled down to make way for an apartment house. The colonial doors, mantels, etc., are advertised for public sale; also the summer house.

Commencement.—At the commencement of the College of Physicians and Surgeons, held May 18, there were 69 graduates. The prize men (gold medalists) were M. J. Nestor, Rhode Island; Ross Anderson, Utah; Fayette E. Read, Massachusetts, and William C. Stiffler, Maryland. The address to the graduates was by Rev. William Howard Falkner. The alumni association met May 17 and elected the following officers: President, Dr. Spencer M. Free, Pennsylvania; vice-presidents, Drs. M. J. Nestor, Rhode Island, and F. A. Ries, Maryland; secretary, Dr. H. C. Knapp, Maryland; treasurer. Dr. C. E. Brock, Maryland, and assistant secretary, Dr. J. W. Chambers, Maryland.

Hospital Staff Appointments.—The following have been appointed on the resident staff of St. Joseph's Hospital for the ensuing year: Dr. J. M. Lynch, senior resident surgeon; Drs. Bernard J. Wess and Sydenham Rush Clarke, resident physicians; Drs. Elmer H. Adkins and Frederick W. Davis, resident surgeons; Dr. H. C. Irwin, resident gynecologist; Dr. Eugene Hayward, pathologist; Dr. H. E. Ashbury, in charge of *x*-ray work. The dispensary staff consists of Drs. John S. Fischer. Eugene L. Crutchfield, physicians, and Drs. Joseph E. Gately, Frank E. Brown, M. J. Cromwell, surgeons.——The following appointments of assistant residents have been made at the University of Maryland Hospital: Physicians, Drs. R. C. Metzel, R. P. Bay and J. H. Smith, Jr.; surgeons, Drs, J. W. Pierson and J. G. Matthews; gynecologist, Dr. H. E. Jenkins.——At the Maternity Hospital Drs. R. L. Mitchell and W. B. Warthen were appointed residents——At Bayview Hospital, Drs. S. L. Bare, W. Henry Smithson, Jr., W. J. Riddick and W. W. Brabham were appointed assistant residents.——The following appointments have been made at the City Hospital: Drs. A. W. Deal, J. C. Fisk, J. J. Boucher, M. J. Nestor, J. H. Harbman, F. P. Bledsoe, G. C. Berkheimer, A. W. Brinham and Robert Wriston.——At the Maternity Hospital Dr. W. A. Dorsey.

MASSACHUSETTS.

Personal.—Dr. Edward M. Frissell, Webster, has been made town physician of Dudley.——Dr. Edward B. Lane, displaced by politics from his position of superintendent of the Boston Insane Hospital, has taken up his residence in Wellesley Hills.

Loses Suit Against Physician.—In the suit of Lucinda Gerrish, administratrix of the estate of the late William R. Gerrish, against Dr. Robert Provan, Boston. in which $10,000 damages was claimed on account of alleged negligence, the court found for the defendant.

Union Medicale of Fall River.—The French-speaking physicians of Fall River, where there is a large French-Canadian population, have organized a local medical society with the above name. Dr. Joseph B. Chagnon was elected president and Dr. Joseph E. Lanoie, secretary.

State Society Meeting.—The one hundred and twenty-fourth annual meeting of the Massachusetts Medical Society is to be held in Boston June 13 and 14. The section meetings of June 13 will be held in the medical library. The Shattuck lecture in the evening of this day will be by Russell H. Chittenden of Yale. in "Some Problems of Intermediary Metabolism," and will be followed as usual by the president's reception. Instead of the usual papers of the second morning there has been arranged a series of demonstrations of clinical and laboratory methods. In booths in the Mechanics' Building prominent specialists will explain to visiting physicians the methods they employ. The ear, skin diseases, physical diagnosis in medicine and in surgery, pathologic anatomy, *x*-ray, nose and throat, urine, bacteriology, blood, legal medicine, sputum, feces, gastric and bladder diagnosis, genitourinary and neurology, will each have the latest possible practical demonstration. The annual discourse, which comes at noon, will be by Dr. Charles A. Drew, State Farm, Bridgewater, and will be followed by the annual dinner.

NEW HAMPSHIRE.

Gift to Hospital.—Mr. and Mrs. Edward Tuck have given $10,000 to the building fund of the Exeter Cottage Hospital.

Dartmouth Commencement.—At the one hundred and eighth annual commencement exercises of Dartmouth Medical School, Hanover, a class of 12 was graduated.——A new medical building, to cost $30,000, is to be erected this summer, adjoining the present college building.

Dartmouth Alumni.—The alumni of Dartmouth Medical College have elected the following officers: President, Dr. Ezra Mitchell, Lancaster, N. H.; vice-presidents, Dr. W. A. Negrattis and Dr. Roy V. Baketel, Manchester, and secretary and treasurer, Dr. Howard N. Kingsford, Hanover.

Military Medical Officers.—The officers of the New Hampshire Association of Military Surgeons for the coming year are: President, Dr. Ezra Mitchell, Lancaster; vice-presidents, Drs. George Cook, Concord, and Orlando B. Douglass, Concord; treasurer, Dr. Granville P. Conn, Concord, and secretary, Dr. Ferdinand A. Stillings, Concord.

State Society Meeting.—The one hundred and fourteenth annual meeting of the New Hampshire Medical Society was held May 18 and 19 at Concord. A program of fourteen papers on various topics was provided. The following officers were elected: President, Dr. Ferdinand A. Stillings, Concord; vice-president, Dr. Ira J. Prouty, Keene; secretary, Dr. Granville P. Conn, Concord; assistant secretary, Dr. Loren A. Sanders, Concord; treasurer, Dr. David M. Currier, Newport; anniversary chairman, Dr. Forrest L. Keay, Rochester, and necrologist, Dr. Eli E. Graves, Penacook.

NEW YORK.

County Society Gets Fee.—Judge Childs has ordered the treasurer of Erie County to turn over to the Erie County Medical Society the $250 fine collected from Mrs. Louisa Busch, Buffalo.

Unlicensed Practitioners Fined.—On complaint of the Franklin County Medical Society, "Dr." D. G. Becker, a Malone dispenser of "cure-all," was arrested, charged with practicing medicine without a license, pleaded guilty, was fined $30, paid the fine, and agreed to discontinue the practice.——Mrs. Louisa Busch, Buffalo, who was recently convicted of practicing medicine without a license, was sentenced to pay a fine of $250 or to be committed to the penitentiary one day for every dollar of the fine left unpaid.

Bills Signed by the Governor.—The most important bill signed by the governor during the past week was one which repealed the law of 1902, which centralized the control of the state hospitals for the insane in the State Commission of Lunacy at Albany and substituted boards of visitation for local boards of managers for each hospital. Among other bills signed were that of Assemblyman Fish authorizing the transfer of inmates of state charitable institutions by the State Board of Charities, one providing that a district attorney must prosecute a person illegally practicing as a physician, one making it a misdemeanor for consumptives at a sanatorium not to obey local health regulations, and also one providing that poison shall not be sold unless properly labeled and the sale recorded.

New York City.

Fresh Air Charity.—The board of directors of the Fresh Air Charity have announced that the institution at Rockaway Park will be open to the poor sick children of the city about June 8. Steps have been taken toward the erection of needed buildings.

Scarlet Fever Hospital.—Although 3.000 invitations were sent out to the formal opening of the Kingston Avenue Hospital, Brooklyn, which took place May 13 and 14, fear of infection was probably the cause of the failure to appear of 2.950 of the invited guests. Patients were admitted May 15.

Contagious Disease.—There were reported to the Sanitary Bureau for the week ended May 13, 742 cases of measles, with 14 deaths; 474 cases of tuberculosis, with 195 deaths; 312 cases of diphtheria, with 36 deaths; 235 cases of scarlet fever, with 13 deaths; 136 cases of cerebrospinal meningitis, with 88 deaths; 37 cases of typhoid fever, with 3 deaths, and 129 cases of varicella.

To Test Pasteurizing Plant.—Under the auspices of the Health Department, there will be a test of the new pasteurizing apparatus brought from Germany at the Nathan Strauss Milk Laboratory. Dr. Park will introduce germs of tuberculosis, diphtheria and scarlet fever into the milk. It will then be placed in the pasteurizer and analysis will be made immediately after it passes through the process.

Notice from the Milk Commission.—The Milk Commission of the Medical Society of the County of New York has sent out a notice to the effect that, while it has supervision only of that portion of a dealer's milk which carries certification, it does not intend to allow a dealer known to have adulterated milk to sell certified milk. Eight dealers on the East Side have been fined sums varying from $15 to $50 for selling adulterated milk during the past week.

Praise for Quarantine.—The consulting board of the health officer of the port of New York, consisting of Drs. Joseph D. Bryant, Edward G. Janeway, Herman M. Biggs, George L. Peabody, Francis P. Kinnicutt, John H. Girdner, James W. McLane, Richard H. Derby, William M. Polk, John W. Brannan, and T. Mitchell Prudden, visited Quarantine May 13 and made a careful inspection of the station, hospital and laboratory. The board passed a formal resolution of approval of the high standard of efficiency maintained by Dr. Doty. Dr. Doty's administration is especially noteworthy, according to these resolutions, in the recognition of the fact that it is in the infected man and his immediate surroundings that danger lies, and not in the ship with its cargo and healthy passengers; in the systematic use of the clinical thermometer for the detection of early and obscure phases of infection; in the application of scientific sanitary measures adapted to each special form of infectious disease; in the efforts to ameliorate the hardships of detention; and in the unwearied efforts, through laboratory research, to add to the knowledge of useful practical sanitation.

PENNSYLVANIA.

Physician Exonerated.—Dr. George H. Marshall, Pittsburg, was exonerated, May 15, of the charge of improperly treating Mary Clifford, a young woman who died at the East End Hospital, April 2, under suspicious circumstances.

Gift to Hospitals.—A philanthropist, who desires that his name be not mentioned, has given $10,000 to the Oil City Hospital for a nurses' home. Grandview Sanitarium for Consumptives received $1,000 from the same individual.

Philadelphia.

Bequest.—By the will of Henry F. Louchheim, the Jewish Hospital, the Jewish Maternity Hospital, the Jewish Foster Home, and the United Hebrew Charities each receives $1,000.

Alumni Meeting.—The annual meeting of the Alumni Association of Jefferson Medical College will be held in the amphitheater of the Jefferson Medical College Hospital June 1. The meeting will be presided over by Dr. Jonathan C. Biddle, Fountain Springs, president, and officers will be elected for the coming year. The annual dinner will be held in the evening.

Women Graduate.—The fifty-third annual commencement of the Woman's Medical College of Pennsylvania was held May 17, when 42 women received degrees. The degrees were conferred by the president of the Board of Corporators, Mrs. Mary E. Mumford. The oration to the class was delivered by Mr. Franklin Spencer Edmonds. Eleven states were represented, and there was one student each from Canada, Chili, China, and Turkey.

Health Report.—The deaths reported for the week ended May 20 reached 456, an increase of one over the number reported last week and a decrease of 21 from the number reported for the corresponding period of last year. There was a marked decrease in the total number of contagious diseases and deaths therefrom as compared with last week, there being 103 new cases of typhoid fever and 16 deaths due to the malady this week, against 155 cases and 23 deaths last week. The principal causes of death were as follows: Typhoid fever, 16; pulmonary tuberculosis, 71; cancer, 23; apoplexy, 15; heart disease, 34; acute respiratory diseases, 50; enteritis, 26; Bright's disease, [illegible] of contagious disease cases aggregated 193, with 19 deaths, as compared with 240 cases, with 36 deaths, for the previous week.

Sickness Among Infants in 1904.—During the summer of 1904 the assistant medical inspectors of the city made a series of house-to-house visits, primarily for vaccinations. In all 27,000 homes were visited. In the course of this work they made a systematic inquiry into the health, sanitary environment and alimentation of all infant inmates up to 2 years, tabulating the facts elicited in each case. A synopsis of these reports in the case of 3,374 babies is given in the following table:

DIET.	Well.	Diseases Caused Probably by Indiscreet Diet.	Account Specific Disease.	Diathetic.	Unclassified.	Total Sick.	Percentages.
Raw milk	500	39	3	1	2	45	8
Mother's milk	1592	58	2	2	7	69	4
Sterilized milk	87	25		.	. . .	25	23
Pasteurized milk . .	14	5	. .		.	5	26
Patented foods .	47	18	.		.	18	27
Table diet	639	53	6	1	7	67	9
Condensed milk	211	27	1	. .	7	35	14
Totals..	3110	225	12	4	23	264	8 5

Vaccinated prior to visit of inspector	578
Vaccinated by the inspector time of visit . .	285
Those having had variola	2
Not vaccinated at all . .	2509

From the high percentage of sickness shown among children fed on sterilized and pasteurized milk, it would be easy, if certain important facts were overlooked, to draw an erroneous conclusion. The authorities of the Health Board, however, think that there can be no doubt that modified milk properly pasteurized is the best diet for artificially fed infants. Infants were not ill because they were so fed, but were fed in this manner because of illness. In many cases the diet had been prescribed on account of illness due to previous improper feeding. In most cases the approved diet had been prescribed only a short time before the visit of the inspector. The comparative immunity which nursing infants seemingly enjoyed from acute specific diseases is shown by this table compiled by the health bureau. The authorities state that these maladies usually reach their minimum during the summer months, and a just basis of comparison is hardly afforded by a table compiled at this time. Yet the small number of cases of such diseases among the large number of infants included in this table is striking.

UTAH.

Personal.—Dr. and Mrs. Frederick D. Bickford, Salt Lake City, leave about June 2 for Europe.

Smallpox in Salt Lake.—On May 16, 8 cases of smallpox, 5 of which were in one family, were reported to the Salt Lake City Board of Health.

Hospital News.—Cache Valley Latter Day Saints' Hospital, Logan, was formally dedicated and opened May 4. The hospital will accommodate 50 patients.——St. Mark's Hospital Society has been organized in Salt Lake City.

State Board Organization.—The State Board of Medical Examiners met April 7 in Salt Lake City and organized, electing the following officers: President, Dr. Elias S. Wright, Salt Lake City; secretary, Dr. Robert W. Fisher, Salt Lake City, and treasurer, Dr. Amasa S. Condon, Ogden.

VIRGINIA.

Fined for Selling Cocain.—W. H. Mathews, Norfolk, was fined $100 and costs on April 1 for selling cocain to a colored woman.

Smallpox Hospital Burns.—The smallpox hospital of Elizabeth County was destroyed by fire April 22. There was one inmate, a negro, who has not been seen since, but "the authorities do not think he perished in the flames."

Must Report Contagious Disease.—An ordinance requiring physicians to report cases of contagious diseases and typhoid fever was adopted by the Richmond City Council May 12. The ordinance provides for a fine for each case. The object of the ordinance is to provide better arrangements for keeping the health statistics of the city.

New Virginia Physicians.—The sixty-seventh annual commencement of the Medical College of Virginia, Richmond, was held May 16, when a class of 38 was graduated, two of whom will not receive their diplomas until they attain their majority. Major Walter D. McCaw, surgeon U. S. Army, delivered the address of the evening.——University College of Medicine, Richmond, held its twelfth annual commencement exercises May 18, when a class of 77 was graduated. Dr. C Alphonso Smith, of the University of North Carolina, delivered the address of the occasion.

Personal.—The class in medical jurisprudence at the Medical College of Virginia presented its professor, Dr. William H. Taylor, with a silver loving cup.——Dr. Charles C. Tucker, Blackstone, superintendent of the Roanoke Hospital, has resigned, and Dr. Thornton, of Charlottesville, succeeds him.——Dr. John F. Winn, Richmond, has been elected to the chair of clinical obstetrics in the University College of Medicine.——Dr. William D. Love, Winchester, was seriously injured in a runaway accident May 17.——The residence of Dr. John C. Anderson, Mineola, was burned April 21. Loss, $5,000, with no insurance.

GENERAL.

Yellow Fever Subsiding in Panama.—A recent cablegram from the canal zone states that no more deaths have occurred among the employes who were stricken with yellow fever May 3. The majority have recovered.

CANADA.

Subscription for Hospital in Labrador.—In addition to other sums secured by Dr. W. T. Grenfell for his medical missionary work, one gift of $5,000 has been made to aid in establishing a hospital on the southern coast of Labrador.

Appropriation for Toronto General Hospital.—The Ontario government will immediately place at the disposal of the University of Toronto $465,000, to be expended on necessary buildings, including a general hospital. Toward this latter Toronto will probably give $200,000. A site is already proposed near the university for the new hospital, which will afford the best facilities for clinical instruction.

Toronto Hospitals Too Crowded.—Dr. R. W. Bruce Smith, inspector of prisons and public charities in Ontario, in his annual report, refers to the need of greater hospital accommodation in Toronto. His official tour of inspection of the Toronto hospitals revealed the fact that unhygienic conditions prevailed in all in some quarters, particularly in the wards set apart for municipal patients. Last year the total expenditure for hospitals in Ontario amounted to $852,240.51, the provincial grant being $110,000.

Amalgamation of McGill and Bishop's Medical Faculty.—The medical faculties of Bishop and McGill's universities will unite June 30, 1905. According to the agreement, the students now at Bishop's will be received by the medical faculty of McGill University at eundem statem. The members of the medical faculty of Bishop's holding only degrees from that body are to receive the degree of M.D., C.M., from McGill, and all the members of Bishop's medical faculty are to be appointed on the staff of McGill.

Personal.—Dr. Allan McLaughlin, London, Ont., has been appointed head surgeon of the Marine-Hospital at Naples, in the service of the United States.——Dr. P. H. Bryce, chief medical officer of the Department of the Interior, Canada, has been on a tour of inspection of the Northwest territories, Manitoba and British Columbia. At the port of Vancouver he has appointed Dr. J. A. L. McAlpine local inspector of immigration, and hereafter all trains entering that city from the United States will be inspected in the same way as boats.

Quarterly Report of Montreal General Hospital.—The receipts for the first three months of this year amounted to $38,470, an increase of $3,781 over last year. The expenditure amounted to $25,644, an increase of $1,719 over the corresponding quarter of last year. The medical report showed that 731 patients had been treated during the quarter and that there had been 61 deaths, 14 occurring within three days of admission. In the out-door departments there had been 11,129 consultations, compared with 9,204 for the first quarter in 1904.

FOREIGN.

New Hygiene Institute in Berlin.—The Berlin University has recently dedicated a "Hygienische Institut" as part of its teaching equipment. A bust of Pettenkofer was unveiled at the opening ceremonies.

Therapeutic Gardening.—Dr. G. Heimann of Berlin has made arrangements with certain gardeners in the city and suburbs to give employment, at certain hours, to persons suffering from nervous affections. He anticipates fine results from this systematic therapeutic gardening.

Russian Sanitariums for Mental Affections in Physicians and Nurses.—The *Russische med. Rundschau* states that the Russian government is planning the construction, at Irkutzk, Tomsk and elsewhere, of sanitariums for psychic affections in physicians and nurses from the seat of war.

Imprisonment for Medical Fraud in Germany.—The court at Landshut recently sentenced an irregular to four weeks' imprisonment for cheating. The suit was brought on account of his having treated a woman with gout by having her wear a "gout prayer," printed on a card which was pasted on her body. She was to wear the card until it dropped off. His fee for this treatment was $1.00.

Opening for Physicians in Russia.—The Russian authorities have decreed that duly accredited medical men and women will be allowed to practice in Russia, serving at the front or in the campaign against epidemic diseases. Since the war began, women physicians in Russia have been placed on exactly the same footing as the men in all respects. The graduates of the Woman's Medical College in St. Petersburg are now eligible to any official medical position open to their male confrères.

Suppression of Medical News in Russia.—The *St. Petersburg. med. Wochft*, states that the official report of the last national medical congress in Russia has been suppressed by the government. It also mentions that the authorities have forbidden the meeting of a certain public health society at which Dr. P. P. Rosanoff was to present the communication he had read at the recent anticholera medical congress at Moscow. The appeal to the government against the bureauocracy at this congress was editorially mentioned in The Journal April 15, 1905, page 1202.

The Waldfrieden Sanitarium for Male Inebriates.—This is the first public sanitarium for alcoholics in Germany and is said to be a model institution. It is located in the country not far from Berlin in large grounds and has 150 beds. Besides the home proper, where voluntary applicants are treated, there are several lock cottages which receive inmates with curable psychoses from abuse of alcohol, sent to the sanitarium from the insane asylums. The institution is in charge of a resident psychiatrist. The inmates, both voluntary and the confined, pay 75 cents a day.

Campaign Against Cholera in Russia.—The Institute of Experimental Medicine at St. Petersburg is conducting two cholera courses, of a month each, to train physicians for the struggle with cholera which it is feared is impending. It is said that from 150 to 200 physicians and medical students are attending these courses. After a week of lectures about 30 young men and women experienced in laboratory work are inoculated with plague and cholera vaccine. They then go to the laboratory connected with the institute, which is on an island off Cronstadt. Here they complete their practical studies in serum and vaccine treatment of these diseases. The director of this laboratory last year succumbed to laboratory plague infection, we remember.

Reception of the Visiting British Physicians in Paris.—A party of English physicians accepted the invitation of their French confrères and visited Paris May 10-11. A large number of pamphlets were printed and distributed among the guests, presenting in artistic manner information in regard to the medical institutions of Paris, their historical features, etc. After the visits to the hospitals and clinics, the receptions, banquet and theatrical entertainment, a special train will convey the party to Vichy, Evian and Lake Geneva, and a second special train has been arranged for the southwestern resorts, including Biarritz and Pau. The hospitals of Paris are in something of a transitional stage just now, as the authorities are reconstructing them, having appropriated $9,000,000 for the purpose, as previously mentioned in these columns.

Epidemic Cerebrospinal Meningitis in Germany.—The latest reports state that from March 27 to April 16 there were 585 cases in the Oppeln district of Upper Silesia, with 326 deaths. The circular, with instructions for recognizing and taking care of the disease, issued by the German government, is reproduced in the *Münch. med. Wochft.* for May 9. The instructions are practically the same as those issued in this country. Several scattered cases have been reported in Berlin. Ghon has been studying the epidemic in Austrian Silesia, and states that he found only two instances in which there were 2 or 3 cases in one family. In all the other cases the epidemic did not spread from house to house or along a street, but the cases developed scattered here and there. In the 912 cases in Galicia, 819 were children, and the mortality was 40 per cent. There have been 7 cases in Vienna to date, and some in southern Austria.

Sanitary Agreement Between France and Italy.—The French government has invited the Italian government to establish a sanitary agreement, based on the International Sanitary Convention of Paris, Dec. 3, 1903, stipulating that both countries shall recognize and admit the efficacy of sanitary measures taken in each other's country, on board of ships coming from ports infected with plague and cholera. This measure will insure for a ship coming, for example, from India and having been subjected to the necessary sanitary measures in an Italian port, free pratique in a French port without further restriction, and vice versa. The proposed agreement would constitute a notable advantage to the commerce and navigation of both countries, and the invitation has been willingly accepted by the Italian government. The director general of public health in Italy (at present in Paris) has been authorized by the Italian government to negotiate with the French authorities in regard to this matter.—*Public Health Reports.*

Recent Decisions of the Prussian Medical Court of Honor.—Among the decisions handed down since last May is one imposing a fine of $15 and costs for the omission to duly notify the physician who had previously been treating the patient. The defendant's plea was that he had not definitely taken over the patient but merely treated him in a special instance. The court decided that the obligation of professional brotherliness imposed the necessity for notification under all circumstances. The same physician was acquitted on a second count of the same kind, as he was able to establish that the statements of the patient's family had justified him in the belief that the patient was no longer receiving medical attendance from the first physician. In another instance a physician was fined for advertising his sanitarium in an organ unworthy of professional recognition. Another decision was to the effect that the individual pecuniary needs of a physician can not be regarded as any excuse for opening an office in a place where he does not reside and which is already sufficiently supplied with physicians' offices. Another physician was fined $250 and costs and deprived of the privilege of voting in the medical chamber for five years. His offence had been unethical advertising and criticism of the methods of his colleagues.

Fifth International Congress of Psychology.—This congress opened at Rome April 26. Professor Bianchi, minister of public instruction, presided, and addresses were made by Janet, official delegate from France, author of "Causes Célèbres," Henschen from Sweden, Motora from Japan, Ingenieros from Argentine, Vaschide from Roumania, Gheorgor from Bulgaria, Hermanides from Holland, and others. Ottolenghi of Rome presented a communication on "Measurement of Pain," with an apparatus for the purpose, in which the pain is measured by the response to the faradic current. Roncoroni of Cagliari stated that he had examined 400 individuals supposed to be mentally sound, and had found that only 25 per cent. of the women and 5 per cent. of the men were absolutely free from some psychic anomaly. Flechsig's address on the mechanism and localization of psychic activity aroused a lively discussion, Henschen and Mangazzoni disputing his views. Sciamanna reported some interesting and instructive experiments on monkeys. Lipps' address on the impossibility of explaining the facts of consciousness by physiologic data attracted great attention, as he is known to be one of the best students of the physiology of the brain, being in charge of an institute for experimental psychology. The *Gazzetta degli Ospedali* for May 4-9 has a report of the proceedings.

Sequel to Jacob's "Pulmonal Infusion."—The Journal mentioned, on page 557 of the last volume, the sensation caused in Berlin by Jacob's treatment of tuberculosis of the lungs by infusion of tuberculin directly into a lower bronchus, with or without tracheotomy. He was said to have suppressed facts in his reports, and to have directly hastened the death of two of the patients thus treated. Suit was instituted against him, and he lost his position as physician to the Charité Hospital. The irregulars took the matter up, and appealed to the authorities to punish him for homicide. The court recently formally acquitted him, stating that there was nothing to prove that he had hastened the death of one of the patients, while this was directly disproved in the other instance. His name, consequently, appears again on the list of privat docents. The "nature healers" recently announced a public discussion of the Jacob case, inviting him to be present. He did not accept the invitation, but sent a letter in which he denied all criminal experimentation, and stated that now that his reputation had been cleared by the testimony of experts he intended soon to enter the lists in a scientific field, and refute his detractors. The "nature healers'" assembly passed resolutions asking the authorities to publish in full the testimony of the experts, and the other details in the case, and protesting against his retention as privat docent in the university.

Conference of the International Association of the Medical Press.—This association is thus far almost entirely European, and the officers make an urgent appeal to American editors for their co-operation. The official conference of delegates was held at Berne in April. France was represented by Doléris of Paris and Blondel, who is the general secretary of the association and has charge of the scientific information bureau in the Sorbonne building at Paris. England was repsented by Mr. Smith, editor of the *Lancet;* Italy by Bossi of Genoa; Spain by Larra of Madrid; Portugal by Bombarda of Lisbon, secretary general of the approaching International Medical Congress; Belgium by Pechère of Brussels, and Switzerland by Jaquet of Basle, editor of the *Corr.-bl. f. Schweiz. Aerzte.* The president of the International Association of the Medical Press, Cortezo of Madrid, was unable to be present owing to his recent appointment as minister of public instruction. His place was filled by Posner of Berlin, editor of the *Berl. klin. Wochft.* It was decided to publish an annual report of the transactions of the association with periodical bulletins. Identification cards are also to be supplied to members, which may prove useful in traveling in foreign countries. The next regular meeting of the association will be an informal gathering before the opening of the approaching International Medical Congress at Lisbon. The principal subject to be discussed and arranged then will be the participation of the medical press in international congresses. The presence of the general secretary of that congress was regarded as a happy omen of a change for the better in this respect. An international code of ethics for the medical press is being prepared. The habit of sending an article for simultaneous publication in several journals is one of the practices condemned. Other subjects that were discussed were the right of property in literary works, articles for advertising purposes, and the free medical journals, which are numerous in France and which offer serious competition to the legitimate medical periodicals.

Association News

Chicago Medical Society Train to Portland.

The Chicago Medical Society has completed arrangements for a special train which will leave Chicago July 6 at 7:30 p. m. and will arrive at Portland at 8 a. m. Monday, July 10. This train goes by the Chicago, Milwaukee and St. Paul and the Northern Pacific railroads, and passes the mountain ranges in the west, such as the Rocky Mountains, Bitter Root Range, Mission Range and Cascade Range, in addition to traveling at least 1,000 miles along rivers and lakes between Chicago and Portland, and passing such cities as St. Paul, Minneapolis, Fargo, Helena or Butte, Spokane, Seattle and Tacoma. The beautiful Puget Sound country is passed en route, as well as the large wheat fields of the north, including the famous irrigation ditches and irrigation localities. This train will consist of Pullman cars, dining car, baggage car, and Pullman observation car. This will be a specially conducted party, and the train will run solid from Chicago to Portland, making sight-seeing stops en route, including a two-hour stop at St. Paul and a three-hour stop at Spokane. Reservations for sleeping accommodations may be made by applying to the secretary of the society, Dr. Frank X. Walls, 103 State street, Chicago.

Marriages

Benjamin Bakewell, M.D., Oakland, Cal., to Miss McElrath.

Julius Broder, M.D., to Mme. Malvine Lobel, both of New York City, May 12.

Foss Schenck, M.D., Cincinnati, to Miss Adelaide Cox, at Colona, Ind., May 3.

Fred M. Anderson, M.D., to Miss Nellie McColm, both of Gravity, Iowa, May 10.

Andrew J. Robinson, M.D., to Miss Emily Parsons, both of Aspen, Colo., May 4.

Harry K. Stoner, M.D., Berlin, Pa., to Jessie Boggs, M.D., of Cleveland, Ohio, May 9.

Charles E. Heartsill, M.D., to Miss Vernie Hefner, both of Marshall, Texas, May 18.

George L. McBride, M.D., to Mrs. Lillian Storrs, both of Grand Rapids, Mich., May 9.

Edwin M. Mendel, M.D., to Miss Loretta Eleanor Jefferson, both of New York City, May 10.

Roy Cruse, M.D., Iron Mountain, Mich., to Miss Anna Esterbrooks of Lead, S. D., May 12.

William Judson Allen, M.D., Beloit, Wis., to Jessie Tempest Petrie, M.D., of Chicago, May 10.

Robert McCheyne Glass, M.D., to Miss Katharine Irvine Cover, both of Winchester, Va., May 10.

John C. Outhet, M.D., to Miss Gertrude Charlotte Paul, both of Chicago, at Rockford, Ill., May 5.

Arthur M. Harrison, M.D., Bowling Green, Ohio, to Miss Herma J. Cuff of Napoleon, Ohio, May 10.

Charles C. Fulton, M.D., to Mrs. Alice Ferguson, both of Portsmouth, Ohio, at Covington, Ky., May 4.

John Franklin Critchlow, M.D., Salt Lake City, to Miss Mary Edna Taylor, at Hailey, Idaho, May 17.

Harry E. Rowan, M.D., Punxsutawney, Pa., to Miss Mamie Brant Zepp of Baltimore, at Alexandria, Va., May 2.

William Albert Nason, M.D., Roaring Springs, Pa., to Miss Sarah Jane Baughman of Blairsville, Pa., May 4.

Deaths

Alexander Allen Faris, M.D. University of Nashville Medical Department, 1868, for more than thirty years a member of the American Medical Association; a Confederate veteran, who lost his right arm in the service; the only physician who remained in Hickman, Ky., throughout the yellow fever scourge of 1878; one of the most prominent and beloved practitioners of Western Kentucky, died at his home in Hickman, May 12, from neurasthenia, after an illness of a year, aged 65.

James H. Hysell, M.D. University of Buffalo Medical Department, 1861, assistant surgeon of the Ninth Virginia Volunteer Infantry, and surgeon of the First West Virginia Veteran Infantry during the Civil War, and chief surgeon of the Second Division, First Army Corps, chief surgeon of Cienfuegos province and later medical disbursing officer at Santiago during the Spanish-American War, died at his home in Pomeroy, Ohio, from chronic malaria, May 10, aged 67.

John W. Bayne, M.D. University of Maryland School of Medicine, Baltimore, 1868, professor of clinical surgery in the University of Georgetown, president of the medical board of Providence Hospital, and major and brigade surgeon of volunteers in the Spanish-American War, died suddenly at his home in Washington, D. C., May 17, from disease of the throat, aged 59.

Alexander W. Rogers, M.D. College of Physicians and Surgeons in the City of New York, 1836, said to have been the oldest alumnus of that institution; for 67 years a practitioner of Paterson, N. J.; one of the founders of the Passaic District Medical Society; died at his home in Paterson, May 14, from acute kidney disease, after a short illness, aged 90.

William H. Thome, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1858, surgeon of the Twelfth Pennsylvania Volunteer Infantry during the Civil War, and thereafter a practitioner of Palmyra, Pa., died in the hospital at the National Soldiers' Home, Hampton, Va., from tuberculosis, after a long illness, April 19, aged 69.

Julius J. Boyle, M.D. University of Buffalo (N. Y.) Medical Department, 1869, a member of the American Medical Association, censor for his district of the Medical Society of the State of Pennsylvania, member of the Susquehanna County Medical Society, died at his home in Susquehanna, Pa., May 12, after a short illness, aged 58.

Edward Pelton Hayward, M.D. College of Physicians and

Surgeons in the City of New York, 1894, acting assistant surgeon, U. S. Army serving in Cuba, Philippine Islands and China; died, March 16, at the home of his mother in Nebraska City, Neb., after an illness of ten days, aged 32.

Hannah C. Rous, M.D. University of Michigan Department of Medicine and Surgery, Ann Arbor, 1886, a member of the American Medical Association, died at her home in Vevay, Ind., May 12, from cerebrospinal meningitis, after an illness of five weeks, aged 51.

Sarah G. Jones, M.D. Howard University Medical Department, Washington, D. C., 1893, said to have been the only colored woman holding a license issued by the Virginia State Board of Medical Examiners, died at her home in Richmond, Va., May 11.

Henry Joseph Halley, M.D. Jefferson Medical College, Philadelphia, 1856, a pioneer physician of Saline County, Mo., died at the home of his son in Kansas City, February 21, from paralysis, after an illness of three years, aged 71.

Pierre A. Marks, M.D. Miami Medical College, Cincinnati, 1867, assistant surgeon on the U. S. Gunboat *Fairplay* during the Civil War, died at his home in Chicago, May 12, from pneumonia, after an illness of three weeks, aged 61.

David H. Snowden, M.D. Jefferson Medical College, Philadelphia, 1858, died at his home in Sterling, Kan., March 25, aged about 60. He was to have been the president of the Guthrie (Okla.) University Medical Department.

John Franklin Johnston, M.D. Jefferson Medical College, Philadelphia, 1858, for many years a practitioner of Perrysville, Ohio, died at the home of his daughter in Columbus, Ohio, March 3, after a long illness, aged 70.

Louis B. Milliken, M.D. Medico-Chirurgical College of Philadelphia, 1900, formerly interne at the Altoona (Pa.) Hospital, died at the home of his brother in Silver City, N. M., after a long illness, May 6, aged 30.

Moses S. Hall, M.D., once president of the West Virginia Medical Association, and a graduate of a Louisville college, died near Parkersburg, W. Va., recently, from cancer, after an illness of two months, aged 81.

William H. White, M.D. University of Wooster, Medical Department, Cleveland, 1886, died at his home in Cleveland, May 13, from heart disease consequent on influenza, after an illness of several weeks, aged 66.

Bartlett J. Burke, M.D. University of Louisville Medical Department, 1849, died at his home in Lathrop, Mo., April 17, from uremia consequent on chronic prostatitis, after an illness of one month, aged 86.

B. J. Head, M.D. Medical College of the State of South Carolina, Charleston, 1846, for many years a practitioner of Barnesville, Ga., died at the home of his daughter in Lumber City, Ga., February 16.

Robert Emory Stobart, M.D. Starling Medical College, Columbus, Ohio, 1891, for several years health officer of Pomeroy, Ohio, died in that city, May 4, from tuberculosis, after a long illness, aged 38.

Hiram A. Cummings, M.D. Miami Medical College, Cincinnati, 1881, died at his home in Clear Spring, Ind., from valvular heart disease, April 20, after an illness of two years, aged 47.

John A. Hull, M.D. Jefferson Medical College, Philadelphia, 1859, in charge of the Confederate hospital at Hazlehurst, Miss., during the Civil War, died at La Monte, Mo., February 13.

Edward W. Altvater, M.D. St. Louis Medical College, 1859; assistant surgeon United States Army, 1863 to 1865, died from apoplexy at his home in Upper Falls, Md., May 15, aged 68.

Louis A. Jaegers, M.D., of New Albany, Ind., died at his father's home in Lafayette township, Floyd County, Ind., from disease of the stomach, after an illness of two years, aged 28.

Julian W. Deane, M.D. University of Georgetown Medical Department, Washington, D. C., 1868, died at his home in Deanwood, Washington, May 6.

Jacob W. Thompson, M.D. Starling Medical College, Columbus, Ohio, 1865, died from nephritis at his home in St. Paul, Minn, May 15, aged 69.

John C. Batchelder, M.D. Massachusetts, 1887, of Rockland, Mass., died in a hospital in Boston, May 11, after an operation for appendicitis, aged 71.

David G. Proctor, M.D. Jefferson Medical College, Philadelphia, 1875, died at his home in Thompson, Ohio, May 15, after a brief illness, aged 77.

Rufus Willard, M.D. New York University, New York City, 1861, a pioneer physician of Seattle, Wash., died recently and was buried, May 11.

Louis Frederick Hollands, M.D. Examination, Illinois, 1899, died at his home in Wheaton, Ill., February 21, from heart disease, aged 63.

William O. S. Piper, M.D. Baltimore Medical College, 1898, died at his home in Bellaire, Ohio, May 13, after a short illness, aged 34.

Joshua Bayley Gould, M.D. Vermont Medical College, Woodstock, 1850, of Somerville, Mass., died recently in Philadelphia, aged 85.

Joseph Bernard J. Hoeferlin, M.D. Chicago, 1898, died at his home in Chicago, May 12, from phthisis, after a short illness, aged 24.

Edson A. Jenkins, M.D. Ohio, died at Cottage Hill, Fla., April 19, from heart disease, after an illness of three days, aged 63.

Charles M. Neeld, M.D. Pennsylvania, 1886, died at his home in Scranton Pa., May 12, after an illness of four months, aged 49.

James M. Fickle, M.D. Cincinnati, 1878, died at his home in Stockwell, Ind., May 12, from uremia, after a short illness, aged 58.

Henry P. Merrill, M.D. Harvard University Medical School, Boston, 1867, died at his home in Portland, Me., May 11, aged 62.

J. A. Knighton, M.D. Flint Medical College of New Orleans University, 1900, died at his home in West Point, Miss., May 11.

Benjamin F. Josselyn, M.D. Chicago, 1878, formerly of San Francisco, died at his home in Ontario, Cal., February 23.

J. W. Harwood, M.D. Certificate, 1889, died at his home in Atwood, Tenn., January 14, aged 65.

Charles M. Koier, M.D. Illinois, 1883, died at his home in Chicago, May 15, from diabetes.

Book Notices

DISEASES OF THE SKIN, Their Description, Pathology, Diagnosis and Treatment, with Special Reference to the Skin Eruptions of Children and an Analysis of 15,000 Cases of Skin Disease. By H. Radcliffe-Crocker, M.D. (Lond.), F.R.C.P., Physician for Diseases of the Skin in University College Hospital. Third Edition, Revised and Enlarged. Special Illustrated Edition, with 76 Plates and 112 Illustrations. Vols. I and II. Cloth. Pp. 1466. Price, $8.00 net. Philadelphia: P. Blakiston's Son & Co. 1905.

This book is acknowledged as one of the best text-books on the subject in the English language. It is a safe, accurate, eminently practical and strictly modern treatise, well and clearly written by a man of large experience and of good judgment. Though thoroughly scientific it can be readily followed by the student as well as by the experienced dermatologist. The etiology, symptomatology, pathology and minute anatomy, constitutional conditions, diagnosis and treatment of each disease mentioned is fully covered. Dietetics and general management of cases receive due consideration. The newer remedies and bacteriologic researches in their bearing on dermatology are carefully set forth. Many valuable additions have been made to the text in this new edition, which brings the work up to date.

ELECTRICAL INSTRUMENTS FOR PHYSICIANS AND SURGEONS for Free Distribution. Chicago: R. V. Wagner Co. 1905.

While this is essentially a catalogue, it differs in character from the usual style of such publications. In addition to a complete and well-illustrated list of instruments and other electrical appliances, the book contains short articles descriptive of the manner of using the various appliances. These make interesting reading and give the book a value for the physician beyond that of the average catalogue.

GYNECOLOGY. Medical and Surgical. Outlines for Students and Practitioners. By Henry J. Garrigues, A.M., M.D., Gynecologist to St. Mark's Hospital in New York City. With 343 Illustrations. Cloth. Pp. 461. Price, $3.00 net. Philadelphia and London: J. B. Lippincott Co. 1905.

This book makes a good companion work to Garrigues' "Text-Book of Diseases of Women." The essential points in gynecology are *treated* in a practical way, and minor operations which are liable to be undertaken by the general practitioner are described in detail. The illustrations are unusually good for a book of this kind.

ATLAS AND EPITOME OF OPERATIVE OPHTHALMOLOGY. By Dr. O. Haab of Zurich. Edited, with Additions, by George E. de Schweinitz, M.D., Professor of [illegible] University of Pennsylvania. With 30 Colore[illegible] [illegible] d 154 Text Cuts. Cloth. Pp. 377. Price, [illegible] New York, London: W. B. Saunders & Co. 1905.

The colored plates in this work are worthy of note; they portray the various ophthalmic operations most satisfactorily. There are also over 100 illustrations in the text, which is chiefly explanatory of the plates. Like the other books of this series, it should prove valuable to the general practitioner as well as to the specialist.

Miscellany

St. Louisians at Portland.—The indications are that the St. Louis delegation to the Portland session of the American Medical Association in July will be a record breaker, according to the *Medical Fortnightly*.

Metapsychics.—This new term has been used by Prof. C. Richet of Paris, who has recently been elected president of the Society for Psychical Research. He uses the term as an analogue to "metaphysics," to characterize the subconscious and occult phenomena—phenomena beyond the realm of consciousness.

Properties of Damiana.—John Uri Lloyd, in the *Pharmaceutical Record*, reports the results of his studies of damiana. He found that it is lacking in aphrodisiac properties and that the poorer classes of Mexicans use it as an ordinary domestic beverage, as we use tea or coffee. The studies of damiana were made in its natural habitat, Lower California and Mexico.

Bright's Disease.—Widal and his pupils have shown that aggravation of kidney disease sometimes follows the ingestion of salt and that the increase of albumin goes parallel with the increase of edema. Sicard (*Bulletin de la Société Méd. des Hopitaux de Paris*) reports a case in which this parallelism did not occur and the increased discharge of albumin was followed by no notable augmentation of body weight or of edema.

Nature's Laws.—I have done my best to disabuse the public of the erroneous and harmful view that a man may with safety constantly violate the laws of health, and that he subsequently can go to the doctor and "be fixed up" so that he shall escape the consequences. He may, it is true, receive temporary relief from ill feeling; but he should be made to realize that persistent evil-doing will inevitably lead to ultimate pathologic results, from which there is no relief except by death.—W. B. Ulrich, in his president's address before the Pennsylvania State Medical Society.

The Medical Man's Error.—I have a far greater respect for the ignoramus who, induced by the advertisements in almost every newspaper and magazine published, both secular and religious, purchases a bottle of Hartman's peruna, or Lydia Pinkham's vegetable compound, than I have for the doctor who is supposed to belong to a learned profession—a literary, scientific, logical and rational being—and who prescribes compounds of whose physiologic action, and even of whose composition he is as ignorant as of the pathologic condition he is guessing at.—Boothby, in *Wisconsin Medical Journal*.

Straining Professional Courtesy.—We learn that on May 15 an Italian physician of New York was arraigned on a charge of furnishing a death certificate in the case of a child he had never seen, who had died under the care of an unqualified quack. On the physician's counsel pleading in extenuation that such was the universal practice in the region . . . where the doctor lived, he escaped with a fine of $75 instead of a sentence to nine months' imprisonment, which the judge had first thought fit to impose on him. When we reflect on the chances to conceal crime developed by this amiable custom, it really seems as if the desire to help a needy comrade, qualified by the state or not, might lead to consequences in the highest degree detrimental to that *entente cordiale* that should always prevail between members of the medical profession and the police authorities.—*N. Y. Med. Journal.*

Postoperative Symptoms.—A Roumanian journal describes a number of apparently inexplicable symptoms developing after uneventful laparotomies. In one case a woman of 43, convalescing from a panhysterectomy, suddenly developed hemoptysis the fourth day and died in less than an hour. The lungs were sound. In another case hematuria, incontinence and diarrhea developed the third day after a similar operation. The hematuria subsided the seventh, the diarrhea not until the eleventh day. Other remarkable postoperative phenomena which the writer has observed are intestinal atony and occlusion, gastrointestinal hemorrhage, oliguria, atony and sudden death. His article is summarized in the *Münch. med. Wochft.* for April 4.

Campaign Against Malaria in Roumania.—Several hotbeds of malaria were selected for the campaign in Roumania, undertaken under the direction of Prof. V. Babes of Bucharest. He followed Koch's advice and administered 1 gr. of quinin daily for six to eight days to all those in whose blood the plasmodia were found. After the first week they took 1 gm. every ninth or tenth day for two months. Those who already displayed malarial symptoms took their dose of quinin five hours before the next attack was due. In prophylaxis of the well, every one took 1 gm. every ninth or tenth day for three months. In one community not a single case of malaria developed in 214 thus treated, while 15 cases occurred among 32 persons who did not take any quinin. In another community 1,800 persons were thus preventively treated and none contracted the disease, while there was a morbidity of 20 per cent. in the 800 not treated. In an article in the *Roumania Medicala*, summarized in the *Münch. med. Wochft.* of April 4, he explains the beneficial action of the quinin given in this way as due to the fact that the plasmodia in the blood are destroyed by it, and the mosquitoes biting the individual do not become infected. The prophylaxis was further aided by drainage or petrolization of standing waters.

Centralization of Governing Power Is Demanded.—Out of the multiplicity of associations should be evolved a single authoritative body with power to standardize and to equalize state examining boards and medical colleges, the latter in a way possibly slightly different than is now proposed. Let the colleges themselves be inspected and rated as are firms in the business world. As this method of reaching the colleges becomes more and more thorough, the less need will there be for state licensing boards, until finally their disbanding may be possible, a consummation devoutly to be desired. Smothering of exceptional teaching talent by limiting each professor to a rigid number of hours could be avoided by such a regulating board. If, for instance, an orthopedist can teach other parts of surgery, technically out of his branch, better than other surgeons of the institution, let him do this if the faculty so desire. Whether this central board should take the form of a department of the government in charge of a medical cabinet officer or should be a representative body chosen by the profession is a question for earnest deliberation. The American Medical Association could handle this matter, and in many respects is the proper body so to do. However that may be, we have at present no scheme to cast on the already troubled waters. The various organizations now attempting to solve the problem contain men of the highest acumen and probity and are fully competent to evolve a satisfactory solution. But they must get together.—*American Medicine.*

The Medical Profession—Shall It Be Organized?—There are still a few states that are holding out against the plan of reorganization of the American Medical Association. The objections advanced are those usually opposed to organization of any kind; for example, that the reorganization plan is one suggested by a few for the benefit of a few, and that the rank and file of the medical profession can hope for nothing better when the reorganization is complete than to be led about by the nose, with the rope in the hands of the men who accomplished the establishment of the new order of things. To all who advance such arguments we would simply reply, Go to! All those who object to organization must necessarily do so as individuals and if they have any proposal to make looking to the welfare of the medical profession they must make such proposals also as individuals. In the meantime the American Medical Association is marching grandly by in regiments and companies, their leaders selected by every man who cares to cast his vote and their line of march determined by grand councils in which the best men from every company (if the local societies do their duty) have a voice and through whom every private in the ranks may bring his influence to bear on the questions that concern the organization as a whole. Those who maintain that these things can not be made to work out do so in the face of experience and knowledge. The fact that there have been corrupt municipal administrations has not yet been advanced by any but a deluded few as a reason for doing away with municipal organization altogether. It behooves every physician, every county officer and every state officer to realize what are the possibilities that lie before us with the perfect organization which has been planned. Already our JOURNAL of the American Medical Association and Dr. Charles A. L. Reed have become factors in national politics by a scathing arraignment of those persons responsible for the maladministration of the sanitary affairs of the Isthmian Canal Commission. This but serves as an example of what things may be done when the physicians of the entire country stand shoulder to shoulder for medical representation in the president's cabinet or, for example, for the election of our honorable ancestors to the Hall of Fame. Let the good work go on!—*Western Medical Review.*

Non-Contagiousness of Cancer.—A Paris medical society has been collecting the experiences of its 62 members in regard to the contagiousness of cancer. Out of the 62 replies to the question blank, 16 replied in the negative as knowing of no instance of possible contagion of cancer; 34 replied in the negative to all the questions except possible heredity. Only 1 knew of any cases of marital cancer. One wrote that he knew of a family of 4 sisters, not twins, who all had twin children. One succumbed to cancer of the stomach, one to a lung affection; the others are still living. Bleckmann stated that in an experience of 6,154 cancer subjects, observed between 1884 and 1905, only 4 instances were known in which cancer of the genitalia were observed on both husband and wife. Only 3 members knew of any cases of cancer occurring in persons who had tended cancer subjects; only 1 knew of any cases among neighbors or occupants of the same house. Only 2 knew of any cases of possible contagion between patient and physician. In respect to heredity, 46 knew of cases of possible direct heredity and 30 of collateral. Cases of other possible origin were known as follows: traumatism by 18; trophic disturbances, 5; malaria, 2; vegetables, 2; grief, 1, and animals, 1. The discussion in the society is published in the *Journal de Méd. de Paris* for April 9. One of the 3 members who related specific cases of contagion of cancer cited the experience of a surgeon who was removing a mammary cancer when the blood spurted and hit him in the nose. A fatal epithelioma developed later at this point. Another member knew of 2 cases of uterine cancer which might possibly have owed their inception to local treatment by a midwife who was tending a case of inoperable cancer at the time.

State Boards of Registration

COMING EXAMINATIONS.

The Nebraska State Board of Health, Lincoln, May 31 and June 1. Secretary, George H. Brash, M.D., Beatrice.

Minnesota State Board of Medical Examiners, Old State Capitol Building, St. Paul, Minn., June 6 S. Secretary, C. J. Ringnell, M.D., Minneapolis.

Board of Medical Examiners of Wyoming, State Capitol, Cheyenne, June 7. Secretary, S. B. Miller, M.D., Laramie.

Michigan State Board of Registration in Medicine, The Capitol, Lansing, June 13. Secretary, B. D. Harison, M.D., Sault Ste. Marie.

State Board of Medical Registration and Examination of Ohio, Cleveland, Columbus and Cincinnati, June 13-15. Secretary, Frank Winders, M.D., Columbus.

Board Representing the President and Fellows of the Medical Society of Delaware, Dover, June 20-22. Board Representing the Homeopathic Medical Society of Delaware, Wilmington, June 20-22. Secretary of the Medical Council of Delaware, P. W. Tomlinson, M.D., Wilmington.

State Board of Medical Examiners of New Jersey, Trenton, June 20-21. Secretary, E. L. B. Godfrey, M.D., Camden.

Medical Examining Board of Virginia, Richmond, June 20-24. Secretary, R. S. Martin, M.D., Stuart.

Board of Medical Examiners of Maryland, Baltimore, June 21-24. Secretary, J. McP. Scott, M.D., Hagerstown.

Medical Council of Pennsylvania, Philadelphia and Pittsburg, June 27. Secretary of the Medical Council, H. C. Shaeffer, M.D., Harrisburg.

Arizona April Report.—Dr. Ancil Martin, secretary of the Board of Medical Examiners of Arizona, reports the written *examination held at Phoenix,* April 3 and 4, 1905. The number of subjects examined in was 9; total number of questions asked, 90; percentage required to pass, 75. The total number examined was 10, of whom 7 passed and 3 failed. The following colleges were represented:

PASSED.

College.	Year Grad.	Per Cent.
University of Buffalo	(1901)	78
University of Michigan ....(1902) 83;	(1904)	75
University Med. Coll. of Kansas City	(1899)	87.2
Jefferson Med. Coll.	(1903)	83.7
University of Southern California	(1904)	90.1
University of Texas	(1898)	79

FAILED.

College.	Year Grad.	Per Cent.
University of Glasgow	(1885)	..
Columbus Med. Coll.	(1881)	65
Hahnemann Med. Coll., Chicago	(1901)	55.9

West Virginia April Report.—Dr. H. A. Barbee, secretary of the State Board of Health of West Virginia, reports the oral *and written examination held at Parkersburg,* April 11-13, 1905. The number of subjects examined in was 9; total number of questions asked, 120; percentage required to pass, 75. The total number of applicants examined was 63, of whom 41 passed and 22 failed. The following colleges were represented:

PASSED.

College.	Year Grad.	Per Cent.
Eclectic Med. Inst., Cincinnati	(1898)	75
Illinois Med. Coll	(1905)	79, 79
Ohio Med. Univ	(1903)	83
College of P. & S., Baltimore ....(1902) 88;	(1904)	75
Louisville Med. Coll	(1905)	82
Howard University	(1904)	77
Medical College of Ohio	(1904)	91
Starling Med. Coll	(1898)	87
Miami Med. Coll	(1903)	88
University of Virginia (1897) 88; (1899) 91; (1900) 84; (1903) 91; (1904) 84.		
University Coll. of Med.	(1900)	82
University of Maryland	(1904)	81
University of Baltimore	(1904)	77
Baltimore Med. Coll	(1902)	80
University of Nashville	(1905)	86
University of Berlin	(1903)	79
Maryland Med. Coll ....(1902) 77;	(1903)	76
Columbian University	(1902)	85

Sixteen undergraduates also passed.

FAILED.

Representatives of the following colleges failed, no percentages were given:

Louisville Med. Coll. (1898), Kentucky School of Med. (1898-1904), Hospital College of Med. (1904), University of the South, 2 (1904), Baltimore Univ. School of Med. (1903). Fifteen undergraduates also failed.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, for the week ending May 20, 1905:

Moseley, E. B., deputy surgeon general, ordered to make medical and sanitary inspection of several posts in Department of Colorado.

Kean, J. R., surgeon, ordered to proceed to Panama to confer with Colonel Gorgas, asst.-surgeon general, pertaining to the purchase of medical supplies for the Department of Health of the Government of Isthmian Zone.

Adair, Geo. W., deputy surgeon general, promoted to colonel and asst.-surgeon general, to date from April 6, 1905.

Gray, Wm. W., deputy surgeon general, promoted to lieutenant colonel and deputy surgeon general, to date from April 6, 1905.

Woodson, R. S., surgeon, promoted to major and surgeon, to date from April 6, 1905.

DeLoffre, Samuel M., asst.-surgeon, relieved from duty at Fort Assinniboine, Mont., and ordered to Fort Schuyler, N. Y., for duty.

Bruns, E. H., asst.-surgeon, ordered to proceed from Brookville, Ind., and report to commanding general, Department of California, for duty at Sequoia or National Park, Cal.

Gibner, Herbert C., asst.-surgeon, ordered to proceed from Bridgeport, Conn., and report to commanding general, Department of California, for duty at Sequoia or National Park, Cal.

Mason, Chas F., surgeon, and Rhoads, Thos. L., and Ekwurzel, Geo. M., asst.-surgeons, detailed members of a board of medical officers to meet at West Point, N. Y., June 1, 1905, for the physical examination of the cadets of the graduating class at the U. S. Military Academy, and such other cadets and such candidates for admission to the academy as may be ordered to appear before it.

Hall, John D., asst.-surgeon general, granted thirty days' leave.

Palmer, Fred W., asst.-surgeon, left U. S. Rifle Range, Arcadia, Mo., on ten days' leave of absence.

Cole, Clarence L., asst.-surgeon, appointed first lieutenant, asst.-surgeon, to rank from May 10, 1905.

Duncan, Wm. A., asst.-surgeon, recently appointed, ordered to Fort Leavenworth, Kan., for temporary duty.

White, J. Samuel, contract surgeon, returned to Fort Snelling, Minn., from detached service at Camp Lakeview, Minn.

Sparrenberger, Frederick H., contract surgeon, ordered from Fort Mott, N. J., to Sea Girt, N. J., for duty during the target practice.

Pinkston, Omar W., contract surgeon, ordered from Washington, D. C., to Fort Mansfield, R. I., for duty.

Probert, Merton A., contract surgeon, returned to duty at Fort Crook, Neb., from leave of absence.

Wolven, F. Homer, dental surgeon, ordered from Fort Adams, R. I., to a tour of duty at the posts in the Artillery District of Portland, beginning with Fort Williams, Maine.

Foster, Douglas E., dental surgeon, ordered from Fort Slocum, N. Y., to Fort Jay, N. Y., for duty.

Navy Changes.

Changes in the medical corps, U. S. Navy, for the week ending May 20, 1905:

Bertolette, D. N., medical director, commissioned medical director with rank of captain, from April 5, 1905.

Beyer, H. G., medical inspector, commissioned medical inspector with rank of commander, from April 5, 1905.

DeValin, C. M., surgeon, commissioned surgeon, with rank of lieutenant commander, from Jan. 31, 1905.

Guest, M. S., surgeon, commissioned surgeon, with rank of lieutenant commander, from March 3, 1903.

Warner, R. A., and Stalnaker, P. R., asst.-surgeons, commissioned asst.-surgeons, with rank of lieutenant (J. G.) from May 3, 1905.

Vickery, E. A., asst.-surgeon, detached from the *Southery* and ordered to the *Franklin*.

Hoen, W. S., asst.-surgeon, detached from the *Oregon* and ordered home.

Wilson, H. D., surgeon, commissioned surgeon, with rank of lieutenant commander, from March 31, 1903.

Dunn, H. A., P. A. surgeon, commissioned P. A. surgeon, with rank of lieutenant, from June 7, 1904.

Tolfree, H. M., P. A. surgeon, commissioned P. A. surgeon, with rank of lieutenant, from June 14, 1904.

Webb, U. R., P. A. surgeon, commissioned P. A. surgeon, with rank of lieutenant, from Oct. 11, 1904.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending May 17, 1905:

Gassaway, J. M., surgeon, granted leave of absence for four days from May 23.

Light, S. D. W., acting asst.-surgeon, granted leave of absence for six days from May 2.

Malony, J., acting asst.-surgeon, granted leave of absence for thirty days from July 1.

Gibson, F. L., pharmacist, department letter granting Pharmacist Gibson leave of absence for twelve days from May 6, 1905, revoked.

BOARD CONVENED.

Board to meet at Baltimore, May 12, 1905, for the physical examination of cadets, Revenue-Cutter Service. Detail for the Board: Surgeon L. L. Williams, chairman; Asst.-Surgeon W. H. Frost, recorder.

APPOINTMENT.

Dr. Simon P. Brooks appointed acting asst.-surgeon for duty at Memphis, Tenn.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, Public Health and Marine-Hospital Service, during the week ended May 20, 1905:

SMALLPOX—UNITED STATES.

District [illegible]: Washington, May 6-13, 6 cases.
Florida: [illegible] 6-13, 12 cases.
Illinois: [illegible] 33 cases, 1 death; Galesburg, 1 case.
Louisiana: New Orleans, April 29-May 13, 23 cases, 1 death. Two cases imported.
Massachusetts: Lowell, May 6-13, 2 cases; Quincy, April 29-May 6, 2 cases.
Michigan: Detroit, April 29-May 13, 5 cases, 1 death; Grand Rapids, May 6-13, 15 cases.
Missouri: St. Louis, May 6-13, 12 cases, 1 death.
New Hampshire: Nashua, April 29-May 13, 5 cases.
New York: New York, May 6-13, 6 cases, 1 death.
Ohio: Cincinnati, April 28-May 5, 8 cases.
Pennsylvania: Lebanon, May 6-13, 1 case; York, April 29-May 13, 29 cases.
Rhode Island: Providence, May 6-13, 1 case.
South Carolina: Charleston, April 29-May 6, 2 cases; Greenville, April 20-May 6, 4 cases.
Tennessee: Memphis, April 29-May 13, 12 cases; Nashville, May 6-13, 2 cases.
Wisconsin: Milwaukee, April 29-May 13, 10 cases.

SMALLPOX—INSULAR.

Philippine Islands: Manila, March 11-April 8, 3 cases.

SMALLPOX—FOREIGN.

Belgium: Ghent, March 25-April 1, 1 death.
China: Niuchwang, April 8, present; Shanghai, March 11-April 8, 3 cases among foreigners, 14 deaths, natives.
Ecuador: Guayaquil, April 18-25, 3 deaths.
Great Britain: Edinburgh, April 15-22, 1 case; Nottingham, April 22-29, 4 cases; Southampton, April 15-29, 1 case, 2 deaths.
India: Bombay, April 11-18, 95 deaths; Calcutta, April 8-15, 14 deaths; Karachi, April 9-16, 5 cases, 3 deaths; Madras, April 7-14, 5 deaths.
Italy: April 13-20, Ancona, 2 cases; Caltagirone, 4 cases; Catania Province, 23 cases; Cosenza Province, 3 cases; Lecce Province, 3 cases; Messina, 3 cases; April 15-22, Palermo, 6 cases, 1 death; Perugia Province, 3 cases.
Japan: Tokyo, April 8, 3 cases.
Turkey: Constantinople, April 16-23, 3 deaths.
West Indies: Grenada, April 6-14, 9 cases.

YELLOW FEVER.

Mexico: Tierra Blanca, State of Vera Cruz, April 23-May 6, 6 cases.
Panama: Colon, Jan. 23-April 6, 6 cases, 3 deaths; Panama, Jan. 1-April 29, 50 cases, 20 deaths.

CHOLERA.

India: Calcutta, April 8-15, 38 deaths.

PLAGUE—INSULAR.

Philippine Islands: Manila, March 11-April 8, 8 cases, 7 deaths.

PLAGUE—FOREIGN.

Africa: East London, April 1-8, 1 case, 1 death.
Australia: Brisbane, April 1, 1 case; New Castle, April 3, 2 cases.
China: Amoy, May 10, present.
Egypt: April 1-8, Alexandria, 1 case; Magagha, 1 case, 1 death; Tukh, April 1-15, 4 cases, 4 deaths.
India: General, March 18-25, 61,688 cases, 53,895 deaths; Bombay, April 9-18, 979 deaths; Calcutta, April 8-15, 762 deaths; Karachi, April 9-16, 191 cases, 182 deaths.
Japan: Formosa, April 10, 19 cases, 6 deaths; Hiroshima, April 12, 1 death.
Peru: April 9-16, Chiclayo, 6 cases, 5 deaths; Lambayeque, 1 case; Lima, 4 cases, 3 deaths; Chepen, 1 death; Mollendo, 7 cases, 1 death.
Straits Settlements: Singapore, March 25-April 1, 1 death.

Medical Organization

Illinois.

Urbana Medical and Surgical Society.—This society was reorganized at Urbana, Ill., May 9, with the following officers: President, Dr. Charles A. Nichols; vice-president, Dr. Austin M. Lindley, and secretary-treasurer, Dr. Elijah S. Smith.

Indiana.

Third Councilor District Medical Society.—The first annual meeting of the Third Councilor District of the Indiana State Medical Association was held at New Albany, April 20, Dr. Harry C. Sharp, Jeffersonville, presiding. The following counties were represented: Clark, Floyd, Washington, Orange, Dubois, Harrison, Perry and Crawford, Scott being the only county in the district not represented. The following program was rendered: Councilor's address, "Medical Organization," Dr. Harry C. Sharp, Jeffersonville; "Prostatic Cystitis," Dr. William N. Wishard, Indianapolis; "Expert Medical Testimony," Dr. William J. Purkhiser, Salem; "Postpartum Fever, Its Causes and Significance," Dr. Elihu P. Easley, New Albany; "Some Points in the Surgical Treatment of Gangrene," Dr. Charles P. Cook, New Albany; "Treatment of Fractures of the Patella," Dr. David C. Peyton, Jeffersonville; "Ups and Downs of the Profession," by Dr. Claud T. Hendershot, Cannelton; "Pericarditis with Effusion," Dr. W. M. Marshall Varble, Jeffersonville, and "Autointoxication," Dr. Davis L. Field, Jeffersonville. It was voted to hold semi-annual meetings. The society adjourned to meet in Jeffersonville, October 19.

Kansas.

Wabaunsee County Medical Association.—This association, whose preliminary meeting for organization was noticed in The Journal of May 6, met at Alma, May 9, and perfected its organization, electing the following officers: President, Dr. Colonel E. Smith, Alma; vice-president, Dr. Charles E. Menard, Maple Hill; secretary, Dr. A. A. Meyer, Alma; treasurer, Dr. George N. Jeffers, Eskridge; delegate to the state society, Dr. Owen E. Webb, Paxico, and censors, Drs. George W. Beverley, Alma, Owen E. Webb, Paxico, and A. A. Meyer, Alma.

Riley County Medical Society.—Physicians of Riley County met at Manhattan, February 21, and organized a medical society, with the following officers: President, Dr. Charles F. Little, Manhattan; vice-president, Dr. Lewis J. Lyman, Manhattan; secretary, Dr. James D. Colt, Jr., Manhattan; treasurer, Dr. George H. Litsinger, Riley; censors, Drs. Archibald G. Henderson, Leonardville, Claude A. Roberts, Randolph, and Warren D. Silkman, Manhattan, and committee on public health and legislation. Drs. Walter M. Reitzel, Cleburne, William A. McCullough, Manhattan, and Owen E. Edgerton, Randolph.

Mississippi.

Tippah County Medical Society.—A number of physicians of the county met at Ripley, March 31, on call of Dr. Charles D. Mitchell, Pontotuc, councilor for the third district, and organized a county society. Dr. Charles M. Murry, Ripley, explained the objects of standard organization, and the following officers were elected: President, Dr. Charles M. Murry, Ripley; vice-president, Dr. James H. Pearce, Falkner, and secretary-treasurer, Dr. Robert M. Adams, Ripley.

Missouri.

Carroll County Medical Society.—This society was organized at Salisbury on the standard plan, by Dr. Jefferson D. Brummall, Salisbury, councilor for the second district, May 9. Dr. William C. Baird, Bogard, was elected president; Dr. Stonewall W. Miller, Norborne, vice-president, and Dr. Richard F. Cook, Carrollton, secretary.

Knox County Medical Society.—Physicians of the county met at Edina, April 24, and organized a county medical society with the following officers: President, Dr. Lewis S. Brown, Edina; vice-president, Dr. James Myers, Greensburg; secretary-treasurer, Dr. Henry Jurgens, Edina; censors, Drs. Albert R. Wilsey, Hurdland, James R. Northcutt, Knox City, and George S. Brown, Edina, and delegate to the state association, Dr. Henry Jurgens.

Montana.

Park County Medical Society.—This society has been organized at Livingston on the standard plan, with Dr. Robert D. Alton, Livingston, president; Dr. William P. Reynolds, Aldridge, vice-president, and Dr. John B. Beeson, Livingston, secretary and treasurer.

Madison County Medical Association.—This association was organized on the standard plan at Virginia City, May 3, with the following officers: President, Dr. Gay F. Tidyman, Ennis; vice-president, Dr. Peter J. Sheeran, Twin Bridges; secretary-treasurer, Dr. George H. Kennett, Virginia City, and delegate to the state association, Dr. Elmer Sutherland, Sheridan.

New Mexico.

Otero County Medical Society.—Physicians of Otero County met at Alamagordo, March 14, and organized a county society on the standard plan, and elected the following officers: Dr. C. H. Walderschmidt, Alamagordo, president; Dr. Otis W. Miller, Alamagordo, vice-president; Dr. E. B. Van Arsdell, Cloudcroft, secretary; Dr. George C. Bryan, Alamagordo, treasurer; Drs. Otis W. Miller, Alamagordo, Hyatt and Kirkpatrick, censors, and Dr. Jesse R. Gilbert, Alamagordo, delegate to the territorial association.

Ohio.

Ross County Academy of Medicine.—Physicians of Ross County met at Chillicothe, May 3, and organized a medical society. Dr. Jefferson B. Scearce was elected president, Dr. John W. Maxwell, secretary, and Dr. John M. Leslie, delegate to the state association, all of Chillicothe.

Monroe County Medical Society.—With the aid of Dr. James C. M. Floyd, Steubenville, the physicians of the county in convention at Woodsfield, May 5, organized a medical society on the standard plan with the following officers: President, Dr. William G. Webb, Cameron; vice-president, Dr. Alexander H. Korner, Woodsfield, and secretary-treasurer, Dr. Bessie Armstrong, Beallsville.

Portage County Medical Society.—Pursuant to the call of Dr. T. Clarke Miller, Massillon, councilor for the Sixth District, physicians of the county met at Ravenna, March 28, and reorganized the county medical society on the standard plan, electing the following officers: President, Dr. William G. Smith, Ravenna; vice-president, Dr. Emmett W. Price, Kent; secretary, Dr. George J. Waggoner, Ravenna; treasurer, Dr. Eugene B. Dyson, Rootstown, and Dr. Bayard T. Keller, Streetsboro, delegate to the state association.

Northeastern Ohio Union Medical Association.—At the one hundred and thirty-fourth quarterly meeting held in Akron, February 14, a motion to merge the association with the Ohio State Medical Association was unanimously carried, and it will hereafter form a part of the sixth councilor district. The following officers were elected: President, Dr. Frank C. Reed, Akron; vice-presidents, and the presidents of the component county societies; corresponding secretary, Dr. Charles W. Milliken, Akron; recording secretary, Dr. John H. Seiler, Akron, and treasurer, Dr. Harold H. Jacobs, Akron.

Eighth Councilor District Medical Society.—This branch of the state association was organized at Zanesville, January 25, by the councilor, Dr. Edmund C. Brush, Zanesville. Dr. John D. Axline, Shawnee, was elected president; Dr. Charles H. Higgins, Sonora, secretary, and Dr. Fred W. Lane, Cambridge, treasurer. The vice-presidents for the counties making up the district are as follows: Athens County, Dr. Edmund F. Danford, Gloucester; Guernsey County, Dr. Frank M. Mitchell, Cambridge; Licking County, Dr. Ernest J. Barnes, Granville; Morgan County, Dr. Leroy S. Holcomb, Pennsville; Muskingum County, Dr. Abdul M. Templeton, Zanesville; Perry County, Dr. John D. Axline, Shawnee; and Washington County, Dr. Stephen A. Cunningham, Marietta.

Pennsylvania.

Lawrence County Medical Society.—At the regular monthly meeting of this society at New Castle, May 11, Dr. J. N. McCormack, national organizer of the American Medical Association, delivered an address on organization.

South Carolina.

Spartanburg County Medical Society.—At a meeting of the county medical society, held in Spartanburg, March 18, reoganization was effected with the aid of Dr. J. Wilkinson Jervey, Greenville, councilor for the fourth district. The following officers were elected: Dr. John O. Vernon, Wellford, president; Dr. Julian H. Allen, Spartanburg, vice-president; Dr. Oliver W. Leonard, Spartanburg, secretary; Dr. James L. Jeffries, Spartanburg, treasurer; Drs. Gaston D. Williams and Hugh R. Black, both of Spartanburg, delegates to the state association, and Drs. S. T. D. Lancaster, Pauline, George R. Dean, Spartanburg, and James L. Jeffries, Spartanburg, censors. The society starts with a membership of 34.

Texas.

Upshur County Medical Association.—The physicians of Upshur County met at Ailmer, January 16, and organized a county association, electing the following officers: President, Dr. Thomas S. Ragland, Gilmer; vice president, Dr. J. A. Carson, Rosewood; secretary-treasurer, Dr. W. P. Howard; censor, Dr. Charles L. Gregory, Gilmer, and delegates to the state association, Drs. John G. Daniels and H. J. Childress, both of Gilmer.

West Virginia.

Preston County Medical Society.—Ten physicians of the county met at Tunnelton, pursuant to a call made by Dr. Milton H. Proudfoot, Rowlesburg, reorganized the county society, and applied to the state association for a charter.

Society Proceedings

COMING MEETINGS.

American Medical Association, Portland, Ore., July 11-14, 1905.

Rhode Island Medical Society, Providence, June 1.
Arizona Medical Association, Prescott, June 1-2.
Minnesota State Medical Society, St. Paul, June 1-2.
American Laryngological Association, Atlantic City, June 1-3.
American Laryn., Rhin. and Otol. Society, Boston, June 5-7.
American Orthopedic Association, Boston, June 6-8.
Indiana State Medical Association, West Baden, June 7-9.
Maine Medical Association, Portland, June 7-9.
Wisconsin State Medical Society, La Crosse, June 8.
Amer. Assn. of Genito-Urinary Surgeons, Montreal, June 13-14.
Massachusetts Medical Society, Boston, June 13-14.
American Pedriatric Society, Lake George, N. Y., June 19-21.
Medical Society of New Jersey, West End, June 20-22.
Indian Territory Medical Association, Tulsa, June 20-22.
American Climatological Association, Detroit, Mich., June 28-29.
Michigan State Medical Society, Petoskey, June 28-30.

ASSOCIATION OF AMERICAN PHYSICIANS.

Twentieth Annual Meeting, held at Washington, D. C., May 16-17, 1905.

FIRST SESSION.

President's Address.

Dr. E. L. Trudeau, Saranac Lake, spoke briefly of the work of the association since its organization 19 years ago.

A Study of the Fear of Cats and the Power to Recognize Their Presence Unseen and Unheard.

Dr. S. Weir Mitchell, Philadelphia, referred particularly to the 159 replies received to his request for information regarding instances of this power, about one-third being valueless for his purpose. The dread or fear of cats as such does not enter into this discussion. In some instances the results of the presence of cats come on instantaneously, in others the onset is slower. The manifestations vary in different persons, but may amount to chilliness, nausea, convulsions, and even temporary blindness. In one-fourth the cases collected, the condition is a family peculiarity; in one instance 5 of 7 members being affected. Sex has no influence, but the symptoms are more severe in women. Dr. Mitchell has not been able to verify the assertion that George Washington had this aversion to cats. Of the entire number collected, 31 persons are affected by the presence of a cat when the animal is neither seen nor heard. Some persons are thus affected at certain times and not at others. Symptoms thus induced are much the same as in cases in which the cat is seen or heard. Only 4 of the 31 patients say it is because of the odor of the animal; the remainder can not explan how they know of its presence. Dr. Mitchell is inclined to the view that emanations from the animals, not recognized by the olfactory nerves as odors, are responsible for the knowledge and its results. An instance supporting this view is that of one patient who, when young, could distinguish the presence of cats by smell; later she could not recognize any odor but could still detect their presence.

Intrapleural Lipoma.

Dr. R. H. Fitz, Boston, said that lipomas may project into the pleural cavity from the diaphragm, costal wall, or mediastinum. The first is an anatomic curiosity. The costal lipoma may penetrate the chest wall and appear externally; three such tumors have been operated on with two deaths. Of the mediastinal type, three which penetrated the thoracic wall have been operated on, all the patients dying. Fitz adds a case of pedunculate intrapleural lipoma arising in the mediastinum, occurring in a young man of 24, who had an attack of lobar pneumonia. Delayed resolution pointed to a complication and signs suggestive of pericarditis developed. Effusion was suspected, and punctures in the fourth and fifth interspaces were made, both yielding no fluid. The chest was then aspirated with the idea of detecting an empyema, but no pus was obtained. Fat adhering to the needle suggested the possibility of a new growth. The patient finally died. A puncture was then made in the right xiphocostal angle and a pint of pus withdrawn. Autopsy showed pneumonia, purulent pericarditis, and a lipoma as large as a child's head situated as before described. The tumor explained the absence of the usual signs of pericarditis. The possibility of diagnosing such tumors by the presence of fat on the needle used for puncture is suggested. The most important point raised is the question of puncturing the pericardium at the point employed postmortem, especially in cases of suspected tumor. Fitz has punctured through the xiphocostal angle in two cases with no untoward results and other observers have reported cases. It seems desirable to use this route when fluid is not obtained by puncture elsewhere. An advantage is that if fluid be not obtained and drainage seems demanded, the puncture may be followed by incision, the insertion of a finger and evacuation and drainage as indicated.

DISCUSSION.

Dr. James Ewing, New York, exhibited a specimen of lipoma obtained in the dissecting room. It consisted of five lobules, the size of goose eggs, united by connective tissue. It was in the lower part of the left pleura and was joined to the mediastinal tissue over the pericardium by fatty projections and thus partly surrounded the aorta; it also infiltrated the diaphragm. The lung was moderately compressed but not atelectatic. The heart muscle was flabby.

Dr. William Osler, Baltimore, agreed with Fitz that in many cases puncture in the right xiphocostal angle is preferable. He observed the result of puncture at this point on bodies coming to postmortem in the Philadelphia Hospital, as to danger of wounding the liver, diaphragm, etc., and found these structures were not involved; in all instances of puncture high up in the angle the pericardium was readily reached. He has used this method on several patients, in one case removing a large amount of fluid when but little was obtained by punctures elsewhere. The liver is depressed, out of the way, when a large amount of exudate is present. Another point emphasized by him is that too frequently we let patients die from a large pericardial exudate, or at least with it. He can recall four or five cases in which this should have been removed, but was unrecognized antemortem. He believes we should more frequently use a small hypodermic needle to explore doubtful cases; no harm is done if the heart is punctured.

Dr. G. L. Peabody, New York, said that pneumonia differs in type in different years. In one case was a mass of fibrinous exudate so thick it could not be detected by a needle and could not have been removed at operation. He believes a safer rule for tapping is to wait until there is impairment of cardiac function; it is not judicious to tap for diagnosis or as a routine in pneumonia.

Dr. T. M. Rotch, Boston, considered the fifth interspace the best place to tap, especially in children.

Dr. Fitz, in closing, said the special reason for using the xiphocostal route is that if fluid is not obtained and the symptoms indicate its presence, puncture may be followed by incision; in this way may be reached fluid not otherwise obtained because it is behind the heart.

Rhythmic Lateral Displacement of the Heart as a Sign of Unilateral Pleuritic Exudate.

Dr. Charles Lyman Greene, St. Paul, in 1902 first called attention to this sign, the displacement being synchronous with respiration. Observations during the past three years confirm the original statements and show that the sign is of value in differential diagnosis. Cases were cited to show the application of the sign in pleural exudate, and its absence in other conditions. It is absent in subdiaphragmatic abscess, malignant disease of the lung and pleura, and in pneumothorax. It is best observed by the fluoroscope or by auscultatory percussion. The degree of effusion markedly influences the movement, trifling amounts of fluid failing to respond, and massive effusions showing a minimum displacement. Though sometimes obtained by inspection, such observation is subject to error. Right-sided effusions are more easily recognized. Deep respirations are necessary. Greene doubts that effusions cause the diaphragm to become immovable or to project into the abdominal cavity. He also takes issue with the statement that the fluoroscope is necessary accurately to determine the extent of cardiac displacement, auscultatory percussion and simple percussion having yielded outlines corresponding accurately to fluoroscopic findings. He concludes: 1. A rhythmic lateral movement of the heart occurs in unilateral liquid pleural effusions. 2. Such movement is most marked in medium-sized effusions. 3. The heart approaches the affected side in inspiration and moves outward in expiration. 4. The extent of movement is variable, but often amounts to two inches. 5. It may be measured by fluoroscopic examinations, auscultatory percussion, or in the case of right-sided effusions by simple deep percussion of the free cardiac border, or in some instances by mere inspection of the apex beat. 6. Deep breathing and especially forced expiration are essential to the success of the maneuver and, to obtain this, morphin must sometimes be administered.

Gonorrheal Septicemia and Endocarditis.

Dr. W. S. Thayer, Baltimore, said the frequency of gonorrheal endocarditis is now well known, the symptoms differing in no way from those of cases due to other pyogenic organisms. In addition to 8 cases reported by other observers at the Johns Hopkins Hospital, he has seen 2, making a total of 10 cases. The important point is that acute urethritis is not so infrequently followed by endocarditis. Of particular interest is a case seen last July. The patient was a man of 25, who gave a history of gonorrhea four years before, and was at the time he came under observation not fully recovered from an attack beginning three months previous. He had a fever which developed gradually and lasted for seven weeks. The general appearance was that of typhoid fever; the spleen was palpable and there were spots suspiciously like the rose spots of typhoid. The leucocytes ranged from 9,000 to 12,000, with a slight increase in polynuclears. On the twenty-first day, when they were about satisfied the case was one of typhoid fever, bacteriologic examination of the blood showed a pure culture of the gonococcus. No other lesion was to be found, hence the case was one of gonorrheal septicemia. The points to be noted in this connection are (1) mild continued fever may be the only evidence of a septicemia due to the gonococcus, and (2) gonorrheal septicemia, with no evidence of local complications, may run a course of long duration and closely simulate typhoid fever.

Dr. William Osler said that in addition to these mild cases of gonorrheal septicemia of long duration and difficult to differentiate from typhoid fever, demonstration of the organism in the blood being the only method, there are cases of overwhelming intoxication from the gonococcus which at first may resemble typhoid. One case of this sort was mentioned, the patient dying within a week.

Fever in Chronic Endocarditis.

Dr. J. S. Thatcher, New York, based his remarks on 901 cases. He divided them into three groups according to temperature range, those having a maximum respectively of 100, 101.5, and 103 degrees. In the first group were 316 cases. Of the 585 remaining, complications, such as articular troubles, petechial or other hemorrhagic eruptions, or frank signs of marked complications, ruled out 294, leaving 291 cases with the temperature above 100 degrees with no apparent explanation of the fever, except in a very few—the presence of bacteria. Of the 23 cases accompanied by hemorrhagic eruptions, 18 proved fatal, showing the seriousness of this type. Notwithstanding this, in the non-febrile group were 5 hemorrhagic cases. Autopsy showed that petechiæ are not necessarily associated with large fungating or ulcerating lesions of the valves, as 3 of 5 cases posted showed such lesions and 2 did not. Of the 291 cases with no distinct complication, 45 per cent. of febrile cases, 172 ranged from 100 to 101.5 degrees, 66 from 101.5 to 103 degrees, and 53 above 103 degrees. An interesting comparison between febrile and afebrile cases shows that in the two groups the percentage of cases with a previous history of rheumatism does not greatly differ. The effect on the kidneys, as shown by the presence of albumin and casts, was also nearly alike in the two series, and the leucocyte counts did not vary greatly. As to mortality, the rheumatic cases with fever had a much lower death rate, 7 per cent., than the afebrile, 19 per cent. An interesting question is that of the form of lesion on the valve as compared with the clinical picture. The general rule is that those with fungating vegetations are more apt to be febrile and are also more fatal. To this rule are many exceptions. Of 104 autopsies, 70 on patients who showed no fever revealed either large vegetations or ulcerations; 4 which were called malignant had very slight vegetations.

DISCUSSION.

Dr. A. O. J. Kelly, Philadelphia, said that studying endocarditis from the standpoint of general principles readily explains the presence of fever. Endocarditis is simply septicemia, the valve lesions being accidental instead of essential. Hence irregular attacks of fever in endocarditis are not uncommon and are to be expected. For the reason cited, small as well as large valve lesions produce fever. Recurrent attacks are due to recrudescence of the infective process.

Dr. A. Jacobi, New York, said it is the custom to diagnose endocarditis because a murmur is present. Not all cases of murmur, even systolic mitral murmur, are endocarditis, many of them being due to myocarditis. Some of these may be traced for years; they may be better at times even to the extent of the murmur disappearing and then become worse. Cases of myocarditis are best diagnosed by the fact that hypertrophy is not present as a sequel of the murmur. In case of long duration the diagnosis of endocarditis should not be made unless hypertrophy is present.

Dr. James Tyson, Philadelphia, spoke of the relation between chronic endocarditis and petechial eruptions. A girl of 25, now under treatment, has frequently recurring petechial eruptions and subnormal temperature. The eruptions appear suddenly, are particularly marked on the legs and are invited by the upright posture. They disappear more slowly than they appear. The patient has inveterate but slight anemia.

Dr. V. C. Vaughan, Ann Arbor, said that all bacteria lower the temperature of the person infected, the exact effect depending on the kind of germ and the rapidity with which it liberates toxins. This explains the usual difference between diphtheria and tonsillitis, the latter having the higher temperature. The lower the temperature in diphtheria the more dangerous is the case because of the rapidity of toxin liberation. For this reason it is not surprising that the death rate in the afebrile cases reported by Dr. Thacher was greater than in those with a higher temperature. William Osler said fever in endocarditis may be in the form of slight recurrent attacks due to little vegetations on old diseased valves, with acute malignant cases that terminate fatally, or in severe cases which end in recovery. One case had several attacks during fourteen years. Totally different are the cases of fever with chronic vegetative endocarditis in which there is nothing but the fever. Some cases last a year. He exhibited a temperature chart of a case lasting a year in which there was fever every day. No emboli were manifest. A mitral murmur was the same all the time. The heart showed chronic vegetative mitral endocarditis with but little erosion. He has had a series of cases, both mitral and aortic, the longest being thirteen months in duration. In these the fever dominated the whole picture. They belong to a type different from the others; they can not be called malignant.

Dr. F. P. Kinnicutt, Boston, called attention to the fact that not all cases with symptoms as described by Dr. Osler terminate fatally. He has seen two cases recover; one lasted seven, the other five months. The murmur still persists.

A Case of Hemophilia with Special Reference to Joint Symptoms.

Dr. F. P. Kinnicutt, Boston, reported a case possessing many points of interest. The case suggests the possibility of the *de novo* origin of the disease, as there was no family history of the affection. The case was otherwise typical. At the age of 5 began articular attacks which were no doubt hemophilic in origin, as they were preceded by injury. Dr. Kinnicutt saw the patient during seven years and there were recurring attacks of arthritis due to effusion of blood into the joints. The knee joints were particularly involved, and also the elbows. There was high temperature but no redness of the skin over the involved joints. There were also hematomas in the abdominal wall. Finally the joints underwent pathologic changes, and partial ankylosis of some of them resulted. The articular ends of the bones appeared to be enlarged. The patient finally died from what was undoubtedly intra-abdominal hemorrhage. No autopsy was allowed. General consideration of arthropathy in hemophilia shows that it may occur in infancy; both hypertrophy and atrophy of bones occur in late stages. Hemorrhage into joints may be both spontaneous and traumatic in origin. Peritoneal hemorrhage is of rare occurrence.

Clinical Notes on Opium in Myocarditis.

Dr. J. H. Musser, Philadelphia, said that opium exerts no influence on the morbid process in myocarditis, but in many cases is good for the patient. Its use falls into two groups: (1) the continued use; (2) its use at times during the course of the disease. In the dilation of myocarditis, in asystole, and angina pectoris its use is well known. In general heart weakness and during convalescence from acute valvular dis-case it is also valuable. Its continued use in some cases is demanded; in one cited, the only relief obtainable was derived from opium. The drug is of value as a preventive of asystole and other grave accidents. Diuresis is increased for a time in certain cases. In cases of senile weak heart, especially when one wishes to prevent the results of peripheral impressions, the drug is an efficient aid. In cases of chronic myocarditis to prevent and mitigate insults to the weakened heart; the prolonged use of opium is advisable. The drug is not contraindicated in chronic myocarditis complicated by the presence of nephritis. It is valuable in cases of melancholia so often present in these cases, especially when the patient knows his lesion. In the not infrequent cases of hypochondriasis it is well to use opium in addition to the usual supporting treatment. Often it is better to rely on this than on the cardinal drugs usually prescribed.

DISCUSSION.

Dr. M. H. Fussell, Philadelphia, cited a case of severe nephritis during the course of myocarditis in which small doses of morphin hypodermatically gave very happy results. The patient improved rapidly and continued so for several weeks.

Dr. Beverly Robinson, New York, decides on the administration by the condition of the pupils; if they are dilated, he gives opium.

Dr. A. Jacobi, New York, agreed with the statements of Dr. Musser. In many cases in which opium is useful, strychnin is to the same degree harmful.

(To be continued.)

ILLINOIS STATE MEDICAL SOCIETY.

Fifty-Fifth Annual Meeting, held at Rock Island, May 16-18, 1905.

Under the Presidency of Dr. William E. Quine, Cihcago.

Officers Elected.

The following officers were elected for the ensuing year: President, Dr. H. C. Mitchell, Carbondale; vice-presidents, Drs. W. K. Newcomb, Champaign, and M. S. Marcy, Peoria; secretary, Dr. E. W. Weis, Ottawa (re-elected); treasurer, Dr. E. J. Brown, Decatur (re-elected). Springfield was selected as the next place of meeting.

PAPERS OF THE MEDICAL SECTION.

The scientific work was divided into two sections, medical and surgical.

The Optional Disease.

Dr. Heman Spalding, Chicago, discussed the symptomatology and differential diagnosis of smallpox, and showed lantern slides made from photographs taken of patients at the Chicago Isolation Hospital. He also quoted the statistics of the Chicago Department of Health, showing the incidence and death rate of the disease in vaccinated and unvaccinated persons, and described the methods of vaccination. He emphasized the exercise of caution in using an efficient virus. Failure to obtain a "take" is usually due to an inert virus; sometimes it is due to improper technic in vaccinating.

Pericarditis.

Dr. J. H. Bacon, Cleveland, Ohio, discussed the clinical history of the various forms of pericarditis and described a new method of tapping the pericardium. A small trephine opening is made opposite the fifth intercostal space between the midsternal line and the left border of the sternum. The finger is inserted through this opening, adhesions are broken up, and the pericardium is opened. In cases of purulent pericarditis, to prevent infection of the sternum and a subsequent osteomyelitis, the posterior surface of the sternum is covered freely with 10 per cent. iodoform-paraffin or wax. He also suggested that in cases of adherent pericardium the patient's life can often be saved by making a similar opening and loosening the adhesions between the two layers of the pericardium in the same manner as uterine adhesions are liberated. He detailed experiments on dogs that were carried on by him, showing the feasibility of this procedure.

Present Status of Serum-Therapy.

Dr. E. R. Larned, Chicago, defined serum-therapy, and then classified the sera as used in medicine under (a) curative sera and (b) diagnostic sera. He also presented a classification of sera as to efficacy, (a) those of demonstrated efficacy; (b) those whose value appears probable but remains to be proved, and (c) those whose efficacy is *nil.* He described the methods used in the elaboration of sera; and gave a brief outline of the present status of the following sera: (a) Those of demonstrated efficiency are antidiphtheritic, antitetanic, antiplague, antistreptococcic, and sera for exophthalmic goiter. (b) Those whose value appears probable, but remains to be proved, such as serum for hay fever, tuberculin, antityphoid, antirabic, antitubercle, and antivenin. (c) Those whose efficiency is *nil* are antipneumococcic sera, antiscarlatinal sera, antidysenteric sera, antivarioloid sera, antitoxin for cerebrospinal meningitis, serum for rheumatism, serum for syphilis, serum for anthrax, cancer serum, and leprolin.

Scrofula.

Dr. Henry G. Anthony, Chicago, said that scrofula is a factor in dermatology, the importance of which is variously estimated, chiefly because of the diversity of opinion which existed as to what is meant by the term. He emphasized the fact that scrofula is not tuberculosis. Children with tuberculosis of joints do not present the various lesions which occur in the eye and skin of scrofulous patients. It requires nose and throat lesions to produce the clinical picture of scrofula. These nose and throat lesions are not tuberculosis, and the nasal and throat secretions do not contain the bacillus tuberculosis. Clinically and microscopically, the disease is a pyogenic infection of the nose and throat. Tuberculosis readily develops on the pyogenic infections, but this can never be determined clinically, and that is the reason so many believe that the disease is tuberculosis. When a chronic pyogenic infection of the nose and throat is present, it spreads to the ear, eye, skin, glands, and bronchial tubes. The eruption of the skin which occurs from this spreading of pyogenic infection is impetigo and not eczema, of which two varieties were mentioned, one of which is a varicella-like eruption. Eczema may occur in scrofula, but the cases which are usually called eczema are really impetigo. The author has observed that sweating of the hands and feet is an important symptom in the disease. Scrofuloderma is subcutaneous tuberculosis, and lichen scrofulosorum is a tubercular toxemia which occurs in all forms of tuberculosis. The severest of all cases are those in which the infection has extended to the bronchial tubes.

The Educational Treatment of Neurasthenics.

Dr. Charles D. Center, Quincy, believes that cases of neurasthenia are increasing in number very rapidly. He showed that a rather definite percentage of the symptoms of a neurasthenic are illusory or hallucinatory in character, and also claims that practically every case has one chief obsession, and when this is overcome or removed, all lesser symptoms are either abated or are relieved entirely. Reference was made to the use of strychnin in these cases, and it is found that the majority are made worse by its administration. The author emphasizes the need of getting hold of the mentality of each case of neurasthenia, believing that it is more essential to treat the mind than the body.

Late Hereditary Syphilis.

Dr. R. R. Campbell, Chicago, said in establishing a diagnosis of hereditary syphilis there are three valuable points known as the triad of syphilis—Hutchinson's teeth, interstitial keratitis, and a particular form of deafness. He reported several cases of late hereditary syphilis gleaned from the literature, and others that had occurred in his own practice.

The Climatic Treatment of Tuberculosis, with Special Reference to Colorado.

Dr. Clarence L. Wheaton, Chicago, spoke of the mortality from tuberculosis and the period of life at which death occurs during the last census year. He alluded to the necessity for enforcing laws relating to hygienic and sanitary measures, to the establishing of state sanatoria for the care of the tuberculous poor, etc. He referred to the success of the Ottawa tent colony in the treatment of this disease, and said the tuberculosis problem is to be solved at home, based on a study of conditions in Colorado, Arizona and New Mexico. A knowledge of meteorological facts and climatic data is essential in prescribing climate.

Diet in Tuberculosis.

Miss Adella Sater, Ottawa, stated that the appetite is not a reliable criterion as to the amount of food that may be taken and digested by the patient. Hygiene and diet are the foundation stones on which may be constructed successful therapeutics in the cure of tuberculosis.

Indormescent Shocks.

Dr. Hugh T. Patrick, Chicago, calls them indormescent because they ordinarily occur just as the patient is falling asleep. These shocks may be divided, roughly, into motor and sensory. Mild motor shocks, or simple shocks, may be regarded as normal, but in some persons they reach a degree which is pathologic, and in others attain a violence sufficient to make them worthy of medical consideration and special treatment. The sensory form may affect general sensation or the special senses. The manifestation occurs as a symptom of functional disease, and in the vast majority of cases is of no grave significance, although the shock is a most alarming sensation for the patient. Illustrated cases were cited, and the treatment given.

The Practical Significance of Certain Symptoms in the Upper Abdomen.

Dr. J. F. Percy, Galesburg, said that the overlooking in this region of the pathology on which these symptoms are based is one of the strange chapters in the history of diagnosis. The common symptoms are pain due to cholecystitis, ulcer of the stomach and of the duodenum, together with the formation of gas due to inhibited peristalsis. Vomiting is also mentioned, but nausea is a more prominent symptom than the former. Bleeding is also to be noted as one of the symptoms. The significance of these can best be determined by percussion, palpation, and noting costal resistance, especially in the right side. Laboratory methods are of confirmatory value only. Alone they can not make the diagnosis. The periodicity of the attacks from ulcer of the stomach and the duodenum was insisted on, as was also the fact that the cholecystitis or an ulcer of the stomach accounts for many of the chronic lesions of the liver and the pancreas. Both of these facts are new to the literature of this subject.

The Tuberculosis Problem in Illinois.

Dr. Homer M. Thomas, Chicago, stated that the main factor in the solution of the tuberculosis problem in this state is to secure for patients an abundance of pure air. Tuberculosis in Illinois concerns sources of impure air. These are mainly the home and the workshop. Tuberculosis is a house disease. The house is the granary of the bacillus. Houses of one kind and another are the ordinary means of spreading disease. The workshop comes next. This is so because it takes prolonged intimate contact with a person, place, or thing that has been intensely contaminated with tuberculosis matter to give rise to implantation. Probably three-fourths of all cases of the disease conveyed from person to person are contracted in the home, and one-fourth through the workshop and environment. Homes should be made clean, dry, airy and bright. Buildings in which men and women are employed should be made sanitary, and should have a correct standard of air supply and light supply.

The Irido-Choroidal Form of Parenchymatous Keratitis, with Loss of Both Eyes.

Dr. Charles H. Probst, Peoria, said that if iridectomy is to accomplish anything, it should be performed early in the disease, before iridic adhesions had taken place, or before an advanced irido-choroiditis has a chance to develop. On several occasions he has performed iridectomy in the very beginning of the irido-choroidal form of parenchymatous keratitis, with excellent results.

Mixed Infection in Consumption.

Dr. Ethan A. Gray, Chicago, emphasized the necessity of recognizing the presence of more than one infection in pulmonary tuberculosis. Secondary or so-called mixed infections are the chief agencies in producing the symptom-complex, consumption. As to the course of mixed infection, there is danger of mistaking it for la grippe, malaria, colds, etc. Occasionally pleurisy and bronchopneumonia are expressions of mixed infection. Hemorrhage from eroded arteries is a factor in spreading infection. A diazo-reaction does not always mean a fatal prognosis. The treatment should be largely hygienic and climatic, but this is uncertain so far as checking the toxemia is concerned.

Reference was made to the value of streptolytic serum; amount administered, 10 c.c. daily, for six days; treatment is then discontinued until reaction has passed. Usually cough and expectoration are diminished to a minimum, sometimes altogether. The phenomena of reaction were pointed out. There is a diminution in the number of tubercle bacilli unless the sputum is greatly concentrated; normal pulse and temperature. Severe cases only approximate the normal. Serum does not cure tuberculosis, but only clears out bacteria and their toxins, leaving a better field in which to fight the tubercle bacillus. Seven cases are cited, in all of which the septic fever was materially influenced.

The License and Control of the Practice of Medicine in Illinois.

Dr. George W. Webster, Chicago, said that during the session of the forty-third general assembly a bill was introduced creating a board of examiners. Owing chiefly to want of harmonious action on the part of the legislative committee of the Illinois State Medical Society, it failed to become a law. At the present time the chief functions of the Illinois State Board of Health are the general supervision of all sanitary and public health matters, and quarantine in the state, the examining and licensing of physicians and of "other practitioners," the licensing of embalmers, the licensing of midwives, the inspection of lodging-houses in all cities of 100,000 inhabitants and over. The board established a schedule of minimum requirements for medical colleges, making a high school education the preliminary entrance requirement, prescribed the length of the term, which must be not less than seven months, no two courses to be given in the same calendar year of time, prescribed the minimum number of hours of instruction in each term, the studies of the curriculum, the character of the college equipment, and all those colleges complying strictly with these rules were considered in good standing with the board. This simply admitted them to the examination. If their credentials were found satisfactory, and if they possessed a diploma from a recognized school and sustained a satisfactory examination before the board, they were then licensed. The other practitioners referred to are mostly osteopaths, and this term refers to the licensing of all those who treat human ailments without the use of drugs, or by mechanical appliances.

Some Phases of Disordered Metabolism in Nephritis.

Dr. Ralph W. Webster, Chicago, said that nephritis is primarily a constitutional disease, with secondary manifestations in the kidney. The close relationship between the findings in the so-called febrile albuminuria and those in typical nephritis are so marked that a common constitutional condition in each must be granted. All of the causative factors of nephritis produce metabolic disturbances which result in the production of toxins, irritant poisons, changes in the properties of the blood, both physical and chemical, and various other pathologic abnormalities which in themselves cause irritative, and later inflammatory lesions in the kidney resulting in nephritis. A large number of metabolic changes may be directly traceable to the nephritis itself.

The author discussed only the points of chlorid retention, edema and uremia. The retention of chlorids in nephritis is granted, but their relation to edema seems to the author still debatable inasmuch as present knowledge regarding the pathology of albuminuria and edema is not sufficient to warrant the ascribing of a specific influence to the chlorids in edema over and above that of other salts. A discussion of the relation of chlorid intake to increased albuminuria was given, in which the author concluded that in this connection NaCl may act as a specific.

Concerning the theories of edema, those of Cohnheim, Kövesi and Roth-Schulz, and von Kiranyi received attention. The author showed the importance of osmotic changes in the production of this symptom of nephritis. The relation of the amount of water taken in has a double importance in increasing a hydremia and increasing the work of the heart. With regard to the uremia, it seems that one must at present accept the idea of Senator and assume that this condition is purely a group of symptoms brought about through disordered metabolism as a result of lesions in an insufficient kidney, which lesions have, in their turn, been caused by attempts on the part of the kidney to eliminate products of an abnormal metabolism, the result of a specific or non-specific toxemia.

Dr. Charles L. Mix, Chicago, discussed the diagnosis of chronic nephritis.

Ocular Manifestations of Chronic Nephritis.

Dr. Leigh E. Schwartz, Chicago, drew the following conclusions: 1. An ophthalmologic examination should be made in all cases where nephritis exists or is suspected. 2. The non-existence of retinitis must not be inferred because visual disturbance is absent. 3. Ocular manifestations are invaluable where nephritis without albumin exists. 4. The severity of the renal symptoms does not influence those of the eye. 5. Retinal changes may occur before any definite clinical symptoms of nephritis develop. 6. Unilateral retinitis gives a relatively hopeful prognosis. 7. Retinitis may be the first indication of nephritis, even in the later stage. 8. The prognostic value of the hemorrhagic type is not greater than that of other forms of albuminuric retinitis.

Medical Treatment of Nephritis.

Dr. Arthur R. Elliott, Chicago, presented this subject in the following order: First, treatment of chronic nephritis without dropsy; second, treatment of chronic nephritis with dropsy; and, third, treatment of uremia. After discussing the subject at great length under the above heads, the author closed by saying that there is no room for pessimism in our attitude toward this disease, and while obviously there is no remarkable cure to be performed by any mode of treatment, careful regulation of life and attention to little details will secure results which are unsurpassed in any of the chronic dystrophies. The two most important indications are to protect the patient from intercurrent acute disturbance, and maintain the compensatory adjustment in the circulation.

Ideals and Practices of the Medical Profession.

This was the title of the president's address by Dr. William E. Quine, Chicago. He stated that standards differ in different sections and even under different conditions in the same society. It is a fact of familiar knowledge that offenses committed by physicians against the public conscience may be easily tolerated by their own organizations; but offenses against the technical standards of the organizations themselves, although quite unnoticed by the community at large, are liable to severe and lasting penalties, especially if the culprit be of humble rank and without friends. Among misdemeanors of this kind he mentioned advertising in the public prints; the exploitation of remarkable cures and operations; the holding of patents on articles used in the practice of medicine; the pretense of possessing an infallible law of cure; and the acceptance by physicians of commissions on their prescriptions, or on needed appliances which they are instrumental in selling, or on the fees of surgeons received for operations on the physician's patients. Such acts are always small, and surreptitiousness makes them mean; but he fails to see in them convincing proof of gross moral obliquity. Most of them are quite compatible with honorable standing in the community; and yet they are stigmatized, and properly so, by the unanimous vote of the organized profession of the country as derogatory to professional character and incompatible with honorable standing in the profession; and hence are subject to penalty within the organization and profession itself. On the other hand, when physicians violate the public's standards of morality, and thereby bring on themselves public disrepute, their professional standing may be saved from challenge in medical organizations. Such discrimination is neither creditable nor defensible. A life sentence of ostracism should never be inflicted for mere technical transgressions, nor for any others, except such as constitute *prima facie* evidence of depravity of heart.

What We Must Learn and Unlearn in the Treatment of Tuberculosis.

Dr. J. W. Pettit, Ottawa, in his address in medicine, said that it is now a well-established fact that climate is an unimportant factor in the treatment of tuberculosis. Because the medical profession has learned the utter futility of drugs in the treatment of this disease, their responsibility has not ceased. Physicians should guide patients when they do not treat them. A mistake has been made in regarding fresh air as the *sine qua non* in the treatment of tuberculosis. Nutritious food, regular rest and exercise are each of essential importance. There is much to be learned in regard to the housing of tuberculous patients. As to the use of tents, it has been demonstrated that the tent is practicable in cold climates. It fulfills the conditions most perfectly from a scientific standpoint. A practical point essential to success is the importance of an early diagnosis in this disease.

(To be continued.)

NATIONAL ASSOCIATION FOR THE STUDY AND PREVENTION OF TUBERCULOSIS.

First Annual Meeting, held at Washington, D. C., May 18-19, 1905.

The President, Dr. Edward L. Trudeau, Saranac Lake, N. Y., in the Chair.

GENERAL MEETING.

The Necessity for Education.

Dr. Edward L. Trudeau, the president, spoke in his address of the pathologic, bacteriologic, and clinical advances which we have made in our knowledge of the disease until tuberculosis is now recognized as transmissible, preventable, and, in the earlier stages and in certain types, curable.

Individual effort can accomplish little against it; the watchwords of the new association should be organization and cooperation. The first problem is to combine and to direct individual efforts, preferably by bringing each state into touch with the national organization. The first and greatest need in the work is education; if every man and woman in the United States was thoroughly familiar with the disease and with the simple means effective in its prevention, tuberculosis would soon disappear. The duties of states are in establishing higher standards of hygiene, segregating the tuberculous, erecting sanatoriums, dispensaries and laboratories for research. Medical schools should give special instruction to their students, especially in the diagnosis of tuberculosis; too often they are presented the picture of advanced, instead of incipient, cases. In this line, summer courses in sanatoriums could well be given. The dangers of tuberculin in diagnosis have been exaggerated and Dr. Trudeau hopes the association will be a medium for disseminating exact knowledge regarding this agent and its employment. Conditions in the United States now point to increased research work and for this are needed laboratories and endowments, as it is to this branch we must look for the solution of many problems concerning the varieties of the tubercle bacillus, the chemistry of its toxins, and natural and artificial immunity.

Methods of Education of the Public.

Dr. William Osler, Baltimore, in his vice-president's address, said that the one important thing is education. We possess a remarkable amount of knowledge regarding tuberculosis but the association must make it effective. Three parties are to be educated: the public, the profession, the patient. The public is awake in this regard but is still sitting on the edge of the bed, half-dressed. It has three things to do: 1. To enact good laws (such as those in New York). 2. Properly to care for hopeful tuberculous cases. 3. To make provision for hopeless cases. The education of the profession includes three points: 1. They must know that early recognition is the first and most important thing. 2. They must recognize practically the efficiency of open-air treatment. 3. They must educate medical students; this is of paramount importance. For this purpose, general hospitals associated with medical schools should receive acute cases of tuberculosis and also a few early cases for demonstration. A second most important function of general hospitals in this line is the maintenance of a tuberculosis dispensary. The education of the patient can be possible only when he knows the nature of his ailment; no greater mistake was ever made than to withhold from an early case the knowledge that he has tuberculosis. Dr. Osler closed by paying an eloquent tribute to Dr. Trudeau for his early recognition of the true method of treating tuberculosis and for his convictions in carrying it out.

Reporting and Registration of Tuberculosis.

DR. HERMANN BIGGS, New York, in his address as vice-president, said that, though the need of enforced registration is now very generally admitted, it practically does not exist outside of New York City except in a few small cities in this country and in Great Britain. Constant pressure is needed on physicians and authorities who do not believe in compulsory registration. It is true that over-enthusiasm on the part of the younger men for too radical measures may do more harm than the conservatism of others who antagonize such advances, but the golden mean can be obtained only by judicious and insistent pressure in the direction shown by experience to yield the best results. This antagonism has been met in New York until now there is no serious opposition by the profession or the public. In fact, there is less difficulty than in enforcing measures of protection against scarlet fever or diphtheria. Dr. Biggs is thoroughly convinced that systematic work against tuberculosis can never be done without enforced registration as a basis.

Responsibilities of the Layman in the Prevention of Tuberculosis.

MR. TALCOTT WILLIAMS, Philadelphia, delivered the address at the evening session. Individual responsibility is great There are great responsibilities of philanthropic aid, but there is also the danger of fostering pauperism. No profession gives so much to mankind as do physicians and no other people give so indiscriminately. Hospitals in the various cities should unite in maintaining a central bureau for investigating persons applying for free treatment, this being particularly needed for the tuberculous.

Resolutions.

Resolutions were passed at this session asking for inquiry regarding the conditions under which employes in government workshops and offices are compelled to labor; calling attention of municipal authorities to the need for legislation and for the appropriation of funds to aid in the work against tuberculosis; and asking the officers of insurance associations to consider means of combating tuberculosis among their policy holders and also asking them to attend the future meetings of the association.

Officers for the Ensuing Year.

The election resulted as follows: President, Dr. Hermann M. Biggs, New York; vice-presidents, Drs Lawrence F. Flick, Philadelphia, and Vincent Y. Bowditch, Boston. Dr. William Osler was elected honorary vice-president. The directors of the association elected were Drs. E. P. Bicknell, V. Y. Bowditch, J. S. Fulton, C. O. Probst and W. S. Carter, and Mr. Henry Phipps.

SOCIOLOGIC SECTION.

Health as an Investment.

MR. HOMER FOLKS, New York, made an address as chairman of this section. 1. Tuberculosis is the leading cause of death in this country; 2, in the past 2 or 3 decades we have learned much regarding the disease and how to control it, particularly in the way of prevention. From this basis the question inevitably occurs to a layman, namely, if tuberculosis is a preventable disease, why is it not prevented? All the reasons given in answer to this question, Mr. Folks condenses into one, namely, we do not realize the value of public health as an investment; we are not yet ready to devote sufficient means to the saving of human life, even when the opportunity is placed squarely before us. Health authorities are given woefully inadequate sums of money to carry on the work they should do. The postage alone of a communication sent to every voter in greater New York costs $60,000 and this is repeated several times in some campaigns. This particular method might not be the best in campaigning against tuberculosis but the work to be effective must be carried on with something of this magnitude. After comparing the value of freedom from tuberculosis with the so-called "permanent" improvements of cities, Folks concluded that municipalities would be justified in using their credit for funds for the former just as they now do for the latter purpose.

A Working Program for Associations for the Prevention of Tuberculosis, National, State, and Local.

MR. EDWARD T. DEVINE, New York, detailed a program possessing 10 features: 1. The maximum of fresh air and sunlight for all mankind; 2. An abundance of simple and yet sufficiently varied and nourishing food; 3, early diagnosis of every case of pulmonary tuberculosis; 4, registration of all cases; 5, the establishment of institutions for advanced cases; 6, the establishment of state, municipal and private sanitariums for early cases; 7, publicity of the means of preventing infection; 8, conferences for interchange of views among workers; 9, relief in various forms but mainly in the shape of special diet for those being treated at home; 10, further research. To the task of establishing institutions must be added that of educating the rank and file of the medical profession and finally the greater task of creating a sound public opinion "midway between indifference and phthisiophobia, an enlightened public opinion in which everyone is frightened just enough to act sensibly and not enough to act foolishly; just enough to ensure necessary public appropriations and private donations, but not enough to make it difficult for a cured and educated consumptive to find a job; just enough to cause the railways to disinfect the hangings of a sleeping car and the cushions of a day coach, but not enough to cause them to refuse to an indigent consumptive girl, on her way to a sanatorium, the charitable reduction which is given to other indigent persons; just enough to cause the city to build a sanatorium, but not enough to induce the legislature to permit local prejudice to close county after county to the urgently needed sanatorium, except on a bribe to the county commissioners and the township trustees."

Progress of the Sanatorium Movement in America.

MR. WILLIAM H. BALDWIN, Washington, traced the progress of this movement from Dr. Trudeau's Saranac venture 20 years ago to the present widespread adoption of this plan of treatment. Now there are 135 institutions of various kinds, new and old, in 33 of the states and provinces in the United States and Canada, caring for the tuberculous. One-third of the number is in New York and Pennsylvania. The total capacity is 8,400 persons, 30 per cent. of these being in New York. The first sanatorium to be established by a state or provincial association was the Muskoka Cottage Sanatorium at Gravenhurst, Ont., in 1897. The first state sanatorium was erected by Massachusetts at Rutland, in 1898. The first municipal sanatorium was established by Cincinnati in 1897. Sanatorium treatment has demonstrated 3 things: 1. Climate is not an essential or even the most important feature; 2, Necessities are fresh air, rest, nourishing food, and regular habits; 3. In a sanatorium medical superintendence is the most essential factor.

Infection in Transportation.

DR. H. M. BRACKEN, St. Paul, spoke of the methods which were used in railway car sanitation and of efforts to bring about their betterment.

DISCUSSION.

Discussion of these various papers followed by prominent workers in this cause, the subjects being treated in all their various phases.

(To be continued.)

FLORIDA MEDICAL ASSOCIATION.

Thirty-Second Annual Meeting, held at Jacksonville, April 19-21, 1905.

The president, Dr. Edward N. Liell, Jacksonville, in the chair.

Welcome.

Addresses of welcome were delivered by Mayor George M. Nolan on behalf of the city, by President C. E. Garner of the Jacksonville Board of Trade on behalf of that body, and by Dr. James D. Love, Jacksonville, on behalf of the Duval County Medical Society. Dr. William L. Hughlett, Cocoa, responded to the address of welcome.

President's Address.

The president, **Dr. Edward N. Liell**, in his annual address on "The Medical Profession in Its Relation to the Elimination of Communicable Diseases," paid especial attention to the progress in the knowledge of the causation of communicable diseases, and the factors involved in natural resistance and acquired immunity. He lauded the important steps taken in the direction of serum therapy, bacteriology, and the spirit of research which now penetrates almost every department of human activity. He gave due credit to the various institutions of the country which are promoting individual research and thus advancing the science of medicine. He considered that no field of medical research was more promising for investigation than that of the composition and chemistry of the blood. He mentioned the school as a potent factor in the propagation of disease, and stated that a systematic daily medical education of school children was demanded by the preventive medicine of to-day. By the improvement of our public health service will communities in general receive the benefits to which they are entitled by virtue of our advanced knowledge as to the origin and transmission of disease.

Councilors' Reports.

Councilors representing the first, second, third, fourth, seventh and eighth districts made their reports. There are at present only four counties in the state in which the medical profession is not organized, namely, Hamilton, Columbia, Orange and Putnam.

Medical Legislation.

Dr. J. Harris Pierpont, Pensacola, gave a history of the medical legislation of the state, with special reference to the matter of medical examining board laws. The chief forms of opposition encountered were those of the homeopaths and eclectics who have mistakenly thought that the bills were drawn to inflict on them injustice and hardship; the Eddyites, who feared that a just law would protect the public from their unchristian and unscientific practices; certain members of the regular profession and some of the present members of district examining boards who thought a central state board would prove a great hardship to undergraduates by reason of the necessary expense of taking the examination. Among other questions of interest to the profession he mentioned the inadequate compensation ($10) for making postmortem examinations; the gross injustice of allowing physicians only $1 a day when called on to give expert testimony and the unjust license tax imposed on physicians.

Annual Oration.

Dr. Robert H. McGinnis, Jacksonville, delivered the annual oration on "The Superior Man—The Physician's Opportunity in His Consummation." The superior man, said the orator, must be born under the auspices of health and vigor; nourished by the advice of preventive, protective and progressive science; reared and nurtured in an atmosphere of, and surrounded by, the preservative influences of hygiene, sanitation and disinfection, directed by the experiences and the wisdom of the medical man.

Feeding in Typhoid Fever.

Dr. William L. Hughlett, Cocoa, made a strong argument against injudicious feeding of typhoid patients. He believed that during the first two or three weeks of fever, during the stage of active inflammation, feeding does more harm than good, and is more liable to provide culture media for germs than sustenance for vital forces. The essayist has lost all dread of typhoid fever patients starving to death. His plan of treatment, in brief, is to have the patient in a quiet, cool room, to clear the bowels first with calomel and soda, and by occasional, gentle purges, if necessary; to give plenty of water to drink, lemonade and fruit juices, a small quantity of liquid food if desired during the first two or three weeks; to control the temperature by cold baths or frequent sponge baths, with symptomatic remedies as may be required.

Election of Officers.

The election of officers resulted as follows: President, Dr. James M. Jackson, Jr., Miami; vice-presidents, Drs. James F. McKinstrey, Gainesville; Henry E. Palmer, Tallahassee, and Jay H. Durkee, Jacksonville; librarian, Dr. James D. Love, Jacksonville (re-elected), and councilors, Drs. William L. Hughlett, Cocoa, for the seventh district, and Dr. James H. Hodges, Gainesville, for the fifth district.

Gainesville was selected as the place for the next meeting and the date was fixed at the third Wednesday in April, 1906.

NEBRASKA STATE MEDICAL ASSOCIATION.

Thirty-Seventh Annual Session, held in Beatrice, May 2-4, 1905.

The President, Dr. Robert C. McDonald, Fremont, in the Chair.

Welcome.

Contrary to the ordinary rule, the association held an afternoon session and the formal welcome was not given until the evening session, when on behalf of the city Rev. George W. Crofts welcomed the visiting physicians. In the conclusion of his address he made an eloquent tribute to the heroic element in the physicians' profession, and said that in times of pestilence he has stood nobly at his post when nearly all others had deserted.

Dr. Alexander S. von Mansfelde, Ashland, in his response to the address of welcome spoke of legislation bearing on the practice of medicine and commented strongly on the too common practice of prenatal destruction of human life.

President's Address.

Dr. Robert C. McDonald, Fremont, in his presidential address, commended the county societies on the general interest taken in the work of organization; referred to the failure of the medical practice act by reason of the veto of the governor and considered that some of the inferences of the governor in vetoing the bill were unwarranted. He believed that state care of the insane should not be made a matter of politics; favored a state sanitarium for the treatment of tuberculosis and popular education on this and other matters of health, and in closing censured the newspapers which accept advertisements of advertising specialists.

Banquet.

The annual banquet was preceded by an illustrated lecture on the "Yellowstone Park" by Charles Truax, Chicago. Nearly 200 guests were present at the banquet, over which Dr. Ernest J. C. Sward, Oakland, officiated as toastmaster.

Election of Officers.

The election of officers resulted as follows: President, Dr. August F. Jonas, Omaha; vice-presidents, Drs. Benjamin F. Farley, York, and Samuel K. Spalding, Omaha; recording secretary, Dr. A. D. Wilkinson, Lincoln; corresponding secretary and librarian, Dr. H. Winnett Orr, Lincoln; treasurer, Dr. Alexander S. von Mansfelde, Ashland; delegate to the American Medical Association, Dr. Ira N. Pickett, Odell.

Lincoln was selected as the next place of meeting.

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.

107th Annual Meeting, held at Baltimore, April 25-27, 1905.

Officers Elected.

The following officers were elected: President, Dr. Samuel T. Earle, Baltimore; vice-presidents, Drs. Charles O'Donovan, Baltimore; Thomas M. Chaney, Baltimore, and Joseph B. Seth, St. Michaels; secretary-treasurer, Dr. John Ruhräh, Baltimore.

Reports.

Delegates were present from every county, except one, only a provision organization having been effected in Charles County.

Dr. Wilmer Brinton, Baltimore, reported for the trustees that application had been made for the endowment of rooms in the Osler Library Building in honor of deceased physicians. The chairman of the Osler Memorial Fund announced that $20,000 had been subscribed and that $20,000 more would be forthcoming. The report of the library showed that it possessed 14,590 volumes. The memoir committee reported the death of 16 members. The number of members registered was 238, although fully 350 attended. There were present 26 delegates from the counties. A resolution was adopted endorsing the proposed Baltimore sewerage system.

Want New Practice Law.

The report of the Board of State Medical Examiners urged the securing of a new medical law with increased standards for license and inspection of medical colleges. The Maryland license is now recognized in the following states: Delaware, Georgia, Illinois, Iowa, Indiana, Kansas, Maine, Michigan, New Hampshire, Nebraska, Ohio, South Carolina, Texas, Vermont, Virginia and Wisconsin. It is in process of adjustment in Oregon, Wyoming and the District of Columbia.

A committee of nine was appointed to draft a new medical law in accordance with the suggestions of the board. There was some criticism of the examination questions of the board on the part of representatives of the colleges. A change was made in the personnel of the board, Dr. Eugene M. Vanness, Baltimore, the president, withdrawing, and the vacancy being filled by the election of Dr. William M. Dabney, Baltimore.

Medical Defense Adopted.

A plan of medical defense of members was adopted, to be applicable in all cases of suit against members, except in criminal cases, the expense being assumed by the society.

The Osler Address and Presentation of Portrait.

Dr. William Osler's address on "Unity, Peace and Concord" will be published in The Journal.

Following the address a portrait of Dr. Osler, painted by Mr. Thomas C. Corner, Baltimore, the gift of professional friends and admirers, was presented to the society by Dr. Robert W. Johnson, Baltimore, and was accepted with appropriate remarks by the president, Dr. Edward N. Brush.

Dr. Simon Baruch, New York City, delivered an address on "Hydrotherapy in Chronic Diseases." Dr. Edward N. Brush, Baltimore, spoke on "The Physician as a Citizen"; Dr. Clarence J. Blake, Harvard University, on "Collaboration in Medical Education"; Dr. William H. Welch, Baltimore, on "Preventive Medicine"; Dr. Isaac E. Atkinson, Baltimore, on "Modern Therapeutics," and Dr. Robert W. Johnson, Baltimore, on "The Debt This Generation Owes to Surgery."

Annual Banquet.

In the evening the annual banquet took place at the Stafford Hotel, where speeches were made by Governor Warfield, Mayor Timanns, Dr. Clarence J. Blake, Boston; Rev. Donald Guthrie, Mr. George W. Whitelock, and others.

Cancer in Baltimore During the Last Fourteen Years.

Dr. C. Hampson Jones, Baltimore, exhibited a chart of the city showing the occurrence of every case of cancer in Baltimore during 14 years. The even distribution of the deaths was remarkable and there were no "cancer houses." There was no evidence of a general increase in proportion to the population, but the figures showed a greater prevalence in the white race.

Dr. William H. Welch, Baltimore, thought this might be due to the longer lives of the whites. He also thought that any apparent increase of the disease in the population at large might be explainable (1) by the increased life limit, (2) by the improved diagnosis. It is chiefly in internal cancer that the increase is reported, not in accessible parts, as lips, etc.

Tetanus Successfully Treated with Antitoxin.

Dr. Charles F. Davidson, Easton, reported the case of a boy, 12 years old, who suffered from what appeared to be the effects of poison oak on the face and temples. Two days later he went bathing in a dirty stream of water. Shortly after he had a high temperature, and pus formed under the scalp and throughout the left arm, necessitating a number of incisions. Nine days after the bath, tetanus symptoms set in; it was 24 hours before the antitoxin could be procured, and during this time he had nine convulsions. Dr. Davidson administered the antitoxin in 20 cm. doses every four hours for forty hours, during which there were seven convulsions. Some improvement at first was not sustained, and at the end of the forty hours the temperature had risen to 107.4 F., and a very severe convulsion occurred, which seemed likely to end life. Sixty cm. of antitoxin were given, and in one hour 40 cm. more were injected. In one hour the convulsion had ceased, the temperature had fallen to 100 and pulse was 90. Four hours later the last dose was given; there were no further convulsions, and recovery followed. Dr. Davidson thought the case indicated that larger doses were required, as much as 100 cm.

Effects of Diet-Cures in Diabetes Mellitus.

Drs. Julius Friedenwald and John Ruhräh, Baltimore, spoke of (a) the milk cure, (b) the potato cure, and (c) the oatmeal cure. Their observations with the use of milk as a form of diet in diabetes are in accord with those of von Noorden and other recent writers. They have rarely found it advisable to place any of their patients on an exclusive milk diet, except in those severe cases of diabetes in which diacetic acid is present in the urine, and in which the patient is threatened with the onset of diabetic coma, or in which this condition had already set in. On the other hand, they have utilized from one-half to a liter of milk daily in many of their cases of diabetes, in addition to other allowable foods, often with excellent results. It is important, however, to observe the effect of this form of food lest untoward effects be produced and great injury be done the patient.

In their observations with the use of the potato cure in the treatment of diabetes they have never followed the Mosse plan, that is, by replacing all carbohydrates by potatoes, but have rather followed the method suggested by von Noorden, replacing a portion of the bread by this form of food. A patient who is permitted to consume 100 grams of bread a day can take 300 grams of potatoes, so that at least a certain proportion of the bread can be replaced by this form of food. If care be taken to regulate these proportions, they have never seen the slightest harmful effect produced by the use of potatoes even in severe forms of diabetes. In a not inconsiderable number of cases very beneficial results were obtained by them. Their results with the oatmeal diet have been very satisfactory. In mild forms of diabetes this treatment should never be utilized. The oatmeal cure has its place, however, only in the severe forms of diabetes. In these cases they have obtained remarkable results. In certain cases it is possible to rid the urine of sugar entirely when this is impossible on an entirely carbohydrate-free diet. In another class of cases the oatmeal diet not only occasions a disappearance of the sugar in the urine, but also the diacetic acid. The milk cure, potato cure, and the oatmeal cure are valuable aids in the treatment of diabetes. Great care, however, is necessary. Each case must be carefully studied individually to obtain the best results.

Empyema of the Frontal Sinus.

Dr. Richard H. Johnston's patient was a man 30 years old, who had all the diseases incident to childhood. Since then he has been healthy until the beginning of his present illness. In January, 1904, he had what he took to be a mild case of "grip." He was weak and languid for two or three days. After this he convalesced rapidly and was soon able to attend to business. About two weeks later he was taken with a severe pain over the left eye. This pain was peculiar in that it recurred every other day at 12 o'clock noon or between the hours of 12 and 4 p. m. The duration of the pain was five or six hours. Occasionally the paroxysm would miss the alternate day, but was sure to come the third day. If the patient remained perfectly quiet on Sunday, the attack would be postponed until Monday, but if he took a walk or exercised in any way he was sure to suffer. The pain would begin in the left temporal region and gradually extend toward the middle line of the head, with the point of greatest intensity in the region of the supraorbital notch. At first sight, it would become more and more severe, until at the height of the paroxysm the patient would walk the floor in agony. It would then gradually subside and finally disappear, only to return two days later. On hearing his history, Dr. Johnston thought of a possible sinus disease. The only symptoms that could be elicited were dryness of the mucous membrane in the left nostril, and tenderness on pressure over the left eye. Empyema of the frontal sinus was diagnosed from the following points: 1. Dryness of the mucous membrane. 2. The periodicity of the pain, which is quite often seen in frontal sinus disease. 3. The fact that the pain undoubtedly followed an acute, infectious disease. 4. The tenderness on pressure of the affected as contrasted with the sound side. The cardinal symptom of accessory cavity disease, the presence of pus in the nasal fossa, was not present, although the nose was examined carefully several times. Disease of the frontal sinus had never been suggested to the patient. He at first declined operation, but later submitted to it. The frontal sinus was opened and pus and a degeneration mucous membrane was found. This was carefully curetted out and the walls examined for necrosis of bone. The headaches ceased and have not returned. The case must be classed as one of closed empyema of the frontal sinus. Such cases are very rare. The fact that there was never pus in the nose and the positive declaration of the patient that he had never had a discharge of pus into the nose or into the postnasal space rendered the diagnosis difficult. The case was presented as an illustration of intermittent, periodic headache, periodic headache which could not possibly have been cured without an operation.

Causes Contributing to Success in Cataract Extraction.

Dr. Samuel Theobald, Baltimore, said that fifty years ago, when "flap extraction" was in use, the most skillful operators were well content if their failures did not exceed 12 per cent. During the two decades following the introduction of von Graefe's modified linear extraction, 8 to 10 per cent. of failures were not uncommon. Now the operator whose failures exceed 4 or 5 per cent. has little ground for self-congratulation. In a compilation of nearly 2,000 cataract extractions by well-known ophthalmic surgeons of this country and Europe, made by Dr. Frank M. Ring, in 1895, the percentage of failures was 3.67. In 192 consecutive cataract extractions performed by Dr. Theobald, including 100 reported in the *American Journal of Ophthalmology*, in December, 1899, there was a percentage of failures of but 3.12. Among the causes which have most to do with this markedly better showing are (1) the modification in the operation of cataract extraction introduced by von Graefe, (2) the discovery of local anesthesia, (3) the application of the principles of antiseptic surgery to eye operations, (4) the skilled nursing now at command, (5) the improved hospital facilities, (6) the provision against postoperation accidents afforded by such contrivances as the protection shield of the late Dr. Russell Mendoch, and (7) the more definite specialization of eye surgery. Still better results might be obtained could we guard absolutely against infection—which, in spite of careful antiseptic precautions, occurs about twice in one hundred operations—and were our patients, usually well advanced in life, in sound health, were their eyes free from complicating diseases, and were they always as tractable as the operator could wish. The intractable patient sorely taxes the patience and skill of the most expert operator.

Improved Chemical Methods in the Clinical Laboratory.

Dr. Edward L. Whitney, Baltimore, offered the following conclusions: In the use of the physical chemistry methods in pathology, we have obtained the following information of value: 1. Cardiac insufficiency can be differentiated from renal, and when existing together, both can be detected and determined. 2. The lowering of the freezing point in heart disease gives an indication for the use of oxygen by which the freezing point or osmotic tension can be restored to the normal, the cardiac activity increased, and a well-marked diuresis produced. 3. In unilateral kidney disease the freezing point of the blood furnishes information regarding the condition of the other kidney, when taken in conjunction with the symptoms, and if attention is paid to the food and time of feeding. 4. The amount of work or exercise which can be borne by an individual suffering with heart disease, and the effect of heart tonics can be fairly well estimated by a determination of the freezing point and NaCl of the urine under proper conditions, the quotient (freezing point divided by NaCl being between 1.23 and 1.69. 5. Provided a normal diet with the normal amount of fluid is given, a fall in the freezing point below 0.90 degrees, with a low valence number, indicates disturbance of the renal function. 6. In the regulation of the diet in nephritis care should be taken to give foods yielding as small a number of molecules for kidney elimination as possible. 7. With certain reserve we may be able to determine, with a reasonable degree of accuracy, the relative proportion of interstitial and parenchymatous changes by the manner in which water is eliminated and its effects on the freezing point.

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

Atony of Rectum and Anal Sphincters.

The first consideration in the treatment of rectal atony, according to W. Bodenhamer in *N. Y. Med. Jour.*, is to establish a regular habit regarding a daily evacuation of the rectum. This may be aided, if necessary, by an injection of from a half to one pint of cold water at the ordinary temperature at the regular time of going to stool. Cold acts as a tonic, stimulant and astringent by exciting the sensibility and contractility of the rectum, and this procedure should be discontinued as soon as its purpose has been attained. In the more obstinate cases, the chief remedy, according to the author, is nux vomica, which may be administered alone or combined with some other drug and along with this treatment the rectal enemas containing strong astringents and tonic substances should be employed with the view of producing contraction and condensation of the relaxed muscle fibers of the rectum and making them shorter and firmer. Drastic purgatives should not be employed. Aperients are indicated, however, especially when atony of the colon is present, along with the rectal trouble. The use of aperients should be restricted to the smallest dose which will arouse normal peristaltic action and continued until a daily habit of evacuation is established. The astringent injections should not exceed in quantity five or six ounces, and before administering them the rectum should be emptied of fecal contents. The astringent enema should be given once daily, and should be retained for a few minutes if possible. The author, in some cases, has used a decoction of galls or a strong decoction of white oak bark and alum. The following is also recommended by him:

R.	Acidi tannici	gr. xxx	2	
	Vini rubri	℥iv	120	

M. Sig.: To be used as an injection and repeated once daily.

In cases of rectal constipation complicated with anal fissure he recommends the following as used by M. Bretonnean:

R.	Ext. rhatany	ʒii	8	
	Alcoholis			
	Aquæ destil., āā	ʒv	20	

M. Sig.: To be used as an enema, in five or six ounces of water, and repeated once daily. For children, one-fourth this quantity should be used.

In some cases, the following pill is recommended when atony of the cecum exists with that of the rectum in order to soften the hard fecal matter and to excite peristalsis:

R.	Ext. aloes	gr. xxx	2	
	Ext. nucis vom.	gr. xx	1	30
	Ext. hyoscyami	gr. xv	1	
	Ferri sulph.	gr. x		65
	Olei caryophylli	m. v		30

M. Ft. pil. No. xxx. Sig.: One pill daily at dinner or at bedtime.

Extract of nux vomica may be given once daily with advantage in the form of a pill, grain one-half to one (.03-.06). Inspissated ox gall is also of service in some cases. In those cases in which the rectum or rectal pouch is firmly distended by hard fecal masses, which neither purgatives nor injections will soften, mechanical means must be resorted to, by first dilating the anal sphincter, under an anesthetic if necessary; the finger and rectal curette should be used to remove these impacted masses as much as possible, and the remainder should be washed out by the astringent injections. A proper diet, claret, and active exercise in the open air, on foot, horseback or bicycle should be advised.

ATONY OF THE ANAL SPHINCTERS.

The anal sphincters are much less frequently affected than the rectum; however, both may be involved. When the sphincters are affected, the disease is much more readily detected, being external. The sphincters of the anus are more frequently affected in old age, and paralysis is then present and becomes so troublesome that it prevents exercise on foot. In such cases, the patient should evacuate his bowels at bedtime; if emptied in the morning, irritation is produced and kept up during the entire day. In hypochondriacs and in hysterical women, atony of the anal sphincters is frequently present. It may also be brought on by protracted ill health, sedentary habits, immoderate use of alcohol and tobacco or repeated dilatation of the anus by straining at evacuation in cases of chronic dysentery. In the treatment of this condition, the cold water ascending douche is a most valuable remedy in restoring lost tone to the muscles, by applying it to the anus for four or five minutes immediately after evacuation of the bowels and once or twice extra during the day. The following local application is recommended by the author as being of great service in such cases:

R.	Strych. sulph.	gr. x		65
	Ung. aquæ rosæ	℥i	30	

M. Sig.: A small amount to be applied locally once or twice daily.

Or as a lotion the following:

R.	Ext. nucis vomicæ	gr. viii		50
	Alcoholis	℥ii	60	
	Aquæ ammoniæ	ʒi	4	

M. Ft. lotio. Sig.: To be applied locally to the affected parts once or twice daily.

Caffein Administered Hypodermically.

Caffein is recommended in the treatment of diabetes, according to *Amer. Med.*, to overcome fatigue, as it acts as a general tonic to the heart and kidneys. It is also of service in grave pneumonia of old people and in cases of adynamia. The following formulæ, after Huchard, are recommended as the best combinations given hypodermically:

R.	Sodii benzoatis	gr. xlv	3
	Caffeinæ	gr. xxx	2
	Aquæ destil	ʒiss	6

M. Dissolve with heat. Sig.: Ten drops hypodermically four or five times a day; or a stronger solution as follows:

R.	Sodii salicylatis	gr. xlv	3
	Caffeinæ	ʒi	4
	Aquæ	ʒiss	6

M. Dissolve by heat. Sig.: Ten drops hypodermically three or four times daily.

Acne.

The following combinations are recommended by *Bull. Gen. de Ther.* in the treatment of acne of the face:

R.	Sulphuris precip.	ʒvi	24
	Glycerini	ʒv	20
M. et adde:			
	Spts. camphoræ	℥i	30

M. Sig.: Apply with a brush to the face at night; or:

R.	Pulv. cretæ	gr. xv	1
	Sulphuris precip.	gr. lxxv	5
	Tinct. saponis viridis		
	Liq. petrolati, āā	ʒi	4

M. Ft. unguentum. Sig.: Apply to the face and allow it to remain for from ten to fifteen minutes, remove by washing and dust the face with pulverized amylum.

Treatment of Pneumonias.

The present treatment of pneumonia, according to L. Litchfield in *St. Louis Med. Review*, is symptomatic, with the promise of an antitoxin some time in the future. It is the author's belief, however, as against those less optimistic, that much can be done in the way of lessening the mortality by judiciously treating the symptoms as they arise. The patient should have an abundance of fresh air, without draughts, excluding all unnecessary persons from the room. He should not be weighted down with a needless amount of bedclothing, and it is best to clothe him in light woolen pajamas which unbutton in front. At the beginning of the disease the digestive tract should be thoroughly emptied by a calomel or saline purge or both. Water should be given freely, and in the delirious or unruly it should be forced, if necessary, and administered by high saline enemata or by hypodermoclysis. For the pain, if severe, codein or morphin and atropin may be used sparingly hypodermically. If the blood pressure is high with hard, full, bounding pulse, the patient may be bled or veratrum or aconite, with active catharsis and ice bags to the head and chest, may serve the same purpose. Delirious patients should be constantly watched to guard against accident. During the initial stage, especially, nourishment should be given sparingly, and, of course, should be simple and easily digested, as fermentation is liable to occur, and is a serious complication.

Elimination by the bowels and kidneys must be carefully watched. The temperature should be reduced by sponging and packs. The heart is the important organ to watch, as bruits may appear, both mitral and pulmonic, without special significance; the important thing is to note whether or not the second pulmonic sound is exaggerated, as it is a sign that the right heart is being taxed, and that strychnin is indicated. If the pulse becomes weak, irregular or intermittent, digitalis is indicated.

Alcohol is recommended by the author in the form of old whiskey or brandy, as it steadies the nervous system, stimulates the digestive system, regulates the distribution of blood and takes the place of fats and carbohydrates and can be given in large quantities without signs of intoxication. The author recommends it when the pulse approaches 120, and in sufficient quantities to keep the pulse at or below that point.

[Some authors claim that there is a definite physiologic antagonism between strychnin and alcohol. See abstract in The Journal, Dec. 17, 1904, p. 1846.—Ed.]

If cyanosis appears, oxygen is indicated by inhalation, well mixed with air, for if used too concentrated, it is capable of irritating the pulmonary and bronchial tissues. Dyspnea and cyanosis are frequently cleared up under its use. If collapse threatens, hot mustard bath or hot pack, with free use of stimulants hypodermically, should be employed, and the conditions should be watched from hour to hour or minute to minute to note improvement.

For general nervousness, hot baths and hot packs are of value and poultices may sometimes be resorted to. The air may be moistened with steam charged with benzoin or eucalyptol to add to the comfort of the patient when there is dryness of the respiratory tract.

After the crisis has passed or when the temperature has dropped in cases of delayed resolution and the patient's desire for food increases, a full nutritious diet, consisting of eggs, chops, steaks, etc., may be given as long as the pulse is good and there are no signs of pulmonary edema.

Acute and Chronic Gastric Catarrh in Infants.

Robert Hutchison of London recommends in the treatment of acute gastric catarrh that the child be put to bed and all foods withheld until vomiting has disappeared, but during this time sips of iced water may be given in order to relieve the great thirst which is often present. If there is much vomiting there is no occasion for washing out the stomach, but in cases in which nausea alone is present lavage is indicated. The most useful drugs are calomel and bismuth. The treatment should be commenced by giving repeated doses of calomel, grain one-sixth to one-fourth (.01-.015) every two or three hours until two grains have been taken and this should be followed by bismuth in large doses, when the attack will rapidly subside.

CHRONIC DYSPEPSIA.

In the treatment of chronic dyspepsia the main line is dietetic and he gives the following directions for diet:

No food must be taken between the regular meals.

No sugars or sweets of any sort are to be eaten.

The child must not eat new bread, potatoes, peas or beans, turnips or carrots, pickles, pastry, jam, syrup or treacle, or cakes. The diet should consist of stale bread or dry toast, with butter or dripping, bacon, eggs, fish, meat, milk, plain milk pudding (except cornflour, arrowroot or sago) and green vegetables in small quantity; the carbohydrates are thus limited.

Medicolegal

Delusions—Privilege—Hypothetical Questions.—The Supreme Court of California holds, in People vs. Griffith, where the defendant was charged with the crime of assault with intent to commit murder, that an instruction to the effect that, when partial insanity or insane delusion or hallucination is relied on, it must be made to appear that the crime charged was the product or offspring of such insanity, insane delusions, or hallucinations, and not the result of some sane reasoning and natural motives. It also holds that the rule as to privileged communications between a party and his physician does not apply in a criminal case. And it says that in every case where a hypothetical question is asked, based on the evidence, it is not to be presumed that the jury is so stupid as not to understand that it is addressed to the supposed acts, facts, and conditions of the defendant in the case; and the answer which the witness gives to such hypothetical question must have its weight with the jury as bearing on the defendant's individual case, or else the jury, through their ignorance and density, would be unfit to sit in any cause.

May Testify as to Wounds Observed on Prisoner.—The Court of Errors and Appeals of New Jersey holds, in State vs. Miller, a homicide case, that it was not erroneous to permit the physician of a jail. in which the accused was confined, to testify to wounds observed by him on the backs of the hands of the accused, although he also testified that he had the accused removed to a room in another part of the jail and divested of his clothing. It says that the observation made by the witness of the wounds on the hands, and testified to by him, was in no sense a compelling of the accused to be a witness against himself. Nor does the court desire to be understood as conceding that if the physician had rendered himself liable to an action for damages for illegally removing the clothing of a prisoner, and thereby enabling him to observe a wound on the person which had been concealed, the testimony of his observation would have been inadmissible. It says that if the wound were on the face or hand, or a part of his person exposed to common view, it would be absurd to say that testimony of what the wound presented to common observation was compelling a person, on whom the wound was, to be a witness against himself. And it thinks it equally absurd to say that the testimony of the observation of a wound in any part of the body, although obtained by a forcible removal of what concealed it, is to be rejected as produced by compelling a person to be a witness against himself. But the court says that there are cases which carry the protection of the accused under such constitutional restrictions to an extent which seems unwarranted.

Privileged Communications and Evidence of Condition.—The Supreme Court of Indiana says that, in the case of Haughton vs. Ætna Life Insurance Co., a physician testified over the plaintiff's objection that the insured in this case personally employed him, and that he advised professionally with said insured during three months named. Section 505, Burns' Annotated Statutes of 1901, prohibits physicians from testifying to "matter communicated to them, as such, by patients, in the course of their professional business, or advice given in such cases." Competency to testify is the rule, and incompetency is the exception. No person will be excluded from testifying, and no testimony will be rejected, unless within the inhibition of the statute. The statute in no manner attempts to prohibit a physician from testifying to the fact of his employment, and the rendition of professional service to a patient. Such facts are not secret and confidential, but may be, and usually are, known by other persons. The statute only forbids the physician from making public matter concerning his patient communicated to or learned by him, as such, through his professional relation. This rule was not violated in the testimony given by the physician referred to, and there was no error in overruling the plaintiff's objection to this evidence. Briesenmeister vs. Knights of Pythias, 81 Mich. 525; Brown vs. Metropolitan Life Ins. Co., 65 Mich. 306; Nelson vs. Nederland Life Ins. Co., 110 Iowa, 600; Patten vs. United States L. and A. Association, 133 N. Y. 450; Sovereign Camp of Woodmen vs. Grandon (Neb.), 89 N. W. 448; Price vs. Standard Life, etc., Co. (Minn.), 95 N. W. Rep. 1118.

Again, the court says that the material point in controversy in this case was the physical condition of the insured at the time he made and signed the statements contained in the application for insurance, and his own knowledge of the same. As tending to show such facts, evidence of his physical condition shortly before and immediately after the time in question was competent. The statements in question were made by the insured in explanation of contemporary facts—to an intimate friend, while he was in bed, as explanatory of that fact; to the county superintendent, in explanation of the dismissal of his school; to a third party; in explanation of his appearance, walk, and the smell of iodoform about his person. These declarations, made in connection with the manifestly impaired condition of his health at the time, and explanatory thereof, were admissible, under the issues of the case, as tending to show knowledge of his physical condition at the time of making the alleged false and fraudulent statements. Swift vs. Massachusetts Mut. Life Ins. Co., 63 N. Y. 186; Kelsey vs. Universal Life Ins. Co., 35 Conn. 225; Averson vs. Kinnaird, 6 East, 188; Stauffer vs. Young, 39 Pa. 455.

Powers of Health Officer—Employment of Physician.—Section 1412 of the Revised Statutes of Wisconsin of 1898 makes it the duty of every health officer, "on the appearance of any dangerous contagious disease in the territory within the jurisdiction of the board of which he is a member, to immediately investigate all the circumstances attendant on the appearance of such disease, make a full report to such board and also to the State Board of Health; and it shall likewise be his duty at all times promptly to take such measures for the prevention, suppression and control of any such disease as may in his judgment be needful and proper, subject to the approval of the board of which he is a member." The Supreme Court of Wisconsin says, Collier vs. Town of Scott, that, under this statute, the power conferred on the health officer is to "investigate all the circumstances attendant on the appearance of such disease, make a full report to such board and also to the State Board of Health." No authority is vested in the health officer to take measures for the prevention, suppression, and control of disease except subject to the approval of the board of health, and it is clear that the power to investigate and report does not embrace the power to take measures for the suppression and control of disease, vested in the board of health as a board. The statute does not appear to give the health officer any discretionary power concerning the prevention, suppression, and control of the disease, but simply imposes on him the duty of investigating the circumstances attendant on the appearance of the disease, and making report. Whether the health officer could in any case bind the town by the employment of a physician to aid him in such investigation, the court does not now decide. The board, it says, is authorized to take such measures as may be deemed necessary for the prevention, suppression, and control of the disease, and this involves the exercise of discretion, which the statute wisely vests in the board, and which was not intended to be given to the health officer for obvious reasons. The power to charge a town with the expenses of a physician in the prevention, suppression, and control of a dangerous and contagious disease, if it exists in any case, is vested in the board of health, and not in the health officer without the approval of the board, and the physician employed is bound to know at his peril that the action of the health officer in that regard is subject to the approval of the board. A health officer has no power to employ a physician to treat smallpox patients and furnish them with medicine. Again, it was contended in this case that the failure to secure the approval of the board of health does not relieve the town from liability, where the health officer takes such measures as in his judgment are necessary to prevent the spread of disease. But the court does not so understand the statute. It says that the power to investigate and report is given to the health officer without limitation, but the power to take measures for the prevention, suppression, and control of the disease is vested in the board, and can not be exercised by the health officer without approval of the board. Whether this legislation is wise or otherwise, and whether more extensive powers should be given to health officers, are not questions for the courts. Furthermore, under the statutes of Wisconsin, Section 1416 of which provides that the charge shall be against the person so taken care of, or against any other person who may be liable for his support, the court says that it is at least very doubtful whether the board of health has any power to charge a town with the expenses of medical services and medicine furnished to a person infected with smallpox, especially when such person is not a pauper, but well to do, and amply able to pay for such services and medicine.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

American Medicine, Philadelphia.

May 13.

1 *Surgical Intervention in Cases of General Peritonitis from Typhoid Fever and Acute Gonococcus Infection. J. Price, Philadelphia.
2 *Diphtheria Antitoxin in Cerebrospinal Meningitis. A. J. Wolff, Hartford, Conn.
3 *Gallstone Obstruction of the Bowel; Report of a Case; Removal of One Stone from the Bowel and a Second from the Gall Bladder; Recovery. A. C. Wood, Philadelphia.
4 The Alleged Destruction of Red Blood Corpuscles in the Spleen. E. T. Williams, Boston, Mass.
5 Pancreatic Cyst; Report of a Case. M. J. Karpeles, Philadelphia.
6 *McGraw Elastic Ligature for Gastroenterostomy Secondary to Murphy Button: Operation with Description of Technic. R. J. Christie, Quincy, Ill.
7 *Gunshot Wounds and Their Treatments. J. R. Cook, Fairmount, W. Va.

1. **Surgical Intervention in Typhoid and Gonococcus.**—Price states that typhoid and other perforations are always followed by peritonitis, local or general. The possibility of its remaining local or circumscribed by adhesions should not be considered if the diagnosis of perforation has been made. In more than 75 per cent. of the cases recorded, general septic peritonitis has been found with escaping bowel contents, gas and feces, foul pus, and free exudate in considerable quantity. The perforations are quickly and easily found near the ileocecal valve and are rarely multiple or ragged. Whether of large or small caliber, fine pure silk is the safest suture material; the lumen of the bowel can be safely reduced to one-half. The interrupted suture gives the best result and less risk of strangulation. If the margins of the ulcer are ragged they should be trimmed. A resection is an unjustifiable and dangerous procedure; simply anchor the ragged ulcer and disorganized bowel with catgut sutures on the opening between drains, forming an artificial anus or fecal fistula, which is a much safer procedure and is commonly followed by spontaneous closure. If this result does not follow, the fistula can be easily remedied after convalescence. The irrigation or wash toilet, so long practiced, has unquestionably given the best results. It should be a thorough cleansing with sterilized water of the entire surface, both visceral and parietal peritoneum. Price believes irrigation with hot normal salt solution is harmful by irritation. Curetting or wiping dirty points with gauze is followed by good results. The gauze pack, so commonly and recklessly used, is a dangerous procedure, favoring too many acute and chronic obstructions by pressure. Unless the operator understands how to place gauze drains or coffer dams in and about filthy surfaces, he would better fill the peritoneal cavity with hot salt solution and close.

2. **Diphtheria Antitoxin in Cerebrospinal Meningitis.**—Wolff asserts that when the gross lesions of the disease have made extensive onslaughts on the vital centers a cure can not be effected. To be effective, the antitoxin must be used early in the course of the disease and in large amounts.

3. **Gallstone Obstruction of the Bowel.**—Wood reports the case of a woman, aged 58, operated on for intestinal obstruction, due to a gallstone in the ileum, six inches above the valve. The stone weighed 11.6 gms. and measured 9.3 cm. by 8 cm. in circumference. A second stone, weighing 9 gms., was removed from the gall bladder. Brief notes of 21 additional cases, collected from the literature of the past five years, are appended. Of these 22 cases, 12 patients recovered and 10 died; mortality, 47 per cent. But two of the number were men. The ages ranged from 31 to 73. The average age of the women was 59.85 years. One-half of all the cases occurred in the sixth decade. The site of the obstruction was: Duodenum, 1; duodenojejunal junction, 1; jejunum, 2; "small intestine" (probably ileum), 1; ileum, 11 (probably 15); ileocecal valve, 1; colon, 1; not stated (probably ileum), 3. In one case the stone was in a mass of adhesions in the gall-bladder region and caused obstruction by setting up a local peritonitis.

6. **McGraw Elastic Ligature for Gastroenterostomy Secondary to Murphy Button.**—Christie reviews the development of gastroenterostomy, gives credit to American surgeons for its present state of perfection, relates the pathogenic conditions which may be relieved by the operation, classifies cases which are best done with the Murphy button, describes the technic of the elastic ligature operation as a secondary procedure, and gives the history of a case.

7. **Treatment of Gunshot Wounds.**—Cook says that if the Roentgen rays are not available to aid in locating the bullet, in wounds of the leg, arm or body, the best method is to wash out the tract and to await developments. He especially emphasizes the importance of drainage in all operations for gunshot wounds.

Medical Record, New York.

May 13.

8 *Tuberculosis Situation in Penal Institutions, with Especial Reference to the State Prisons at Sing Sing, N. Y., and Columbus, Ohio. S. A. Knopf, New York.
9 *Dermatitis Seborrhoica and Its Relations to Alopecia and Other Conditions. L. D. Bulkley, New York.
10 Prostatectomy. R. Harrison, London.
11 Importance of Early Recognition of Suppurative Ear Disease. A. G. Bryant, New York.
12 *Treatment of Epidemic Cerebrospinal Meningitis with Injections (Chiefly Intraspinous) of Diphtheria Antitoxin. G. L. Peabody, New York.
13 *Case of Long-Standing Major Hysteria Characterized by a Paroxysmal and Fixed Pain, Mental Depression, Confusion, Delirium with Delusions, and Hallucinations Terminating in Sudden Recovery. T. Diller, Pittsburg.
14 *Case of Menstrual Urticaria. D. J. M. Miller, Philadelphia.

8. **Tuberculosis Situation in Penal Institutions.**—Knopf, after a visit of inspection of the state prisons at Sing Sing

and Columbus, makes the following suggestions: All prisoners detained in jails should be subjected to careful medical examination, and all tuberculous individuals should be isolated. Having arrived at the penal institution, tuberculous prisoners should be assigned to the sort of labor best suited to their condition, and the temperature of the work rooms should be carefully regulated to prevent overheating, while proper dust consumers should also be installed. All prisoners should receive periodical medical examinations. Rules against expectoration should be strictly enforced, and the use of stationary and pocket cuspidors is advised, suitable types being illustrated. Tuberculous prisoners should always have separate cells, and all inmates should have a chance to exercise in the open air several times a day. Whenever possible those predisposed to tuberculosis and those in the earlier stages of the disease should be assigned to agricultural work. The more advanced cases should be treated in special wards and should be required to wear mouth masks to prevent infection. The indiscriminate pardoning of far-advanced cases is to be deprecated, as their families are often too poor to provide for them and they easily become sources of infection to others. Prisons should be constructed so that there is plenty of light, air and ventilation on soil that is dry and porous. These conditions do not exist in Sing Sing prison, which is notoriously damp, and the author suggests some temporary improvements, including the substitution of paint for whitewash on the cell walls, which would make it more sanitary, until an institution can be erected in a more suitable situation. The cells of the Ohio prison are, if anything, worse than those at Sing-Sing, and the conditions existing in the work shops, particularly in the tobacco rooms, are highly insanitary.

9. **Relations of Dermatitis Seborrhoica to Alopecia.**—Bulkley says that this is an eruption that forms about one-tenth of the cases which come to the dermatologist. Both sexes are affected in about equal proportions, and, though observed at all ages, from 1 year to 80 years, it is mainly a disease of middle life, almost 53 per cent. of the cases occurring between the ages of 20 and 40. Combining the statistics of alopecia and dermatitis seborrhoica, it appears that in 557 out of 880 cases, or 63 per cent., the loss of hair was due to the latter condition. Dermatitis seborrhoica in all its forms is more or less contagious, and its development is undoubtedly favored by the various elements which lower the vitality and render the skin more susceptible to operation of such local agencies. The differential diagnoses from psoriasis, ringworm, pityriasis rosea, syphilis and eczema is discussed. Bulkley's treatment consists mainly in the application of various combinations of resorcin, sulphur, salicylic acid, carbolic acid, formalin, etc. In this connection he says that proper local treatment is all essential, but for the best results a certain amount of reconstructive treatment is necessary.

12. **Treatment of Epidemic Cerebrospinal Meningitis with Diphtheria Antitoxin.**—Peabody gives the results obtained in 22 cases of the disease treated in this way by himself and Jacobi in the Roosevelt Hospital. In all but one the diagnosis was proved by finding the meningococcus in the spinal fluid. Of the 22 patients, 4 received the antitoxin subcutaneously, 7 received it at different times both subcutaneously and intraspinously, and 11 received it only intraspinously. In only one case did it seem to cause any unpleasant effect. The mortality of the 22 cases, while still uncertain, will go well beyond 50 per cent., and the percentage of recoveries to date is a little over 9. There does not seem to have been any influence for either good or evil ascribable to the antitoxin treatment.

13. **Major Hysteria.**—Diller reports the case of a married woman of 35, who for over two and a half years presented a picture of serious illness, of which uterine hemorrhage, severe autointoxication, mental depression, delirium, elevation of temperature, dyspnea and a great local tenderness and pain in the left lower abdominal and inguinal regions were different phases. No organic basis for the clinical condition could be detected, and one day, during a consultation, it was suggested that an exploratory incision be made through the tender abdominal muscle. From that day the patient began to improve, and three weeks later she was discharged, apparently in the best of physical and mental health.

14. **Menstrual Urticaria.**—Miller epitomizes the literature of this condition and describes its occurrence in a girl of fifteen, who menstruates regularly and whose attacks of urticaria make their appearance seven or eight days before and cease two to three days before each period. Occasionally the urticaria persists until the flow begins, rarely during the first day or two of its course. During the intervals between the periods the patient is quite free from attacks and she is perfectly healthy in other respects. The urticaria is of the ordinary type.

Medical News, New York.

May 13.

15 *Physiology the Basis of Clinical Medicine. Suggestions as to Courses in Applied Physiology. J. M. Taylor, Philadelphia.
16 *Hypodermatic Use of Adrenalin Chlorid in the Treatment of Asthmatic Attacks. D. M. Kaplan, New York.
17 Principles Governing the Technic of Roentgen Ray Therapy. E. G. Williams, Richmond, Va.
18 *Common Causes of Gynecologic Disease, with Some Remarks on Prophylaxis. G. G. Ward, New York.
19 *Remarks on Treatment of Fulminating Appendicitis. J. M. Inge, Denton, Texas.
20 *Gonorrheal Arthritis. H. W. Frauenthal, New York.
21 Case of Sudden Death in a Newly Born Infant Due to Suprarenal Apoplexy. R. E. Pick, New York.

15. **Course in Applied Physiology.**—Taylor discusses the value of possessing a thorough knowledge of practical physiology, and points out the deplorable lack of such knowledge by many in the profession. In this connection, he asks whether the teaching in our medical schools is such that all who graduate have secured opportunities to learn the most important principles by which clear reasoning can be consistently achieved. If not, wherein is the chief deficiency? Appended to the article are letters, or quotations from letters, pertinent to the subject under discussion written by prominent teachers of physiology in all parts of the country. They are unanimous in advocating the more extended teaching of applied physiology.

16. **Adrenalin in Asthma.**—Kaplan reports on the use of adrenalin in the Montefiore Hospital for checking the attacks of asthma, and reports several cases. He says that it is safe to say that the contraindications to the use of adrenalin are generally overstated. Although relieving the paroxysms with greater promptness and certainty than most of the other drugs at our command, the hypodermic use of adrenalin chlorid is in no sense curative of the disease as such, and equally useless are prophylactic injections.

18. **Causes of Gynecologic Disease.**—Ward is of the opinion that a large proportion of these diseases are preventable, and that if the causes and etiologic factors were given more prominence in the teaching of gynecology, the physician would be influenced to avoid these pitfalls, and thus save many a woman from an operation or from chronic invalidism. Prophylaxis means prevention, and in order intelligently to prevent the occurrence of any disease, it is important that we understand the cause. Prophylaxis in gynecology is largely dependent on the proper conduct of a labor or an abortion. Disregard of the importance of antepartum examination, and the cultivation of diagnosis by abdominal palpation, thus reducing the amount of vaginal manipulation during labor; the too ready resort to the forceps and their unskillful use, especially in regard to their application through an undilated cervix, the lack of inquiry as to whether the uterus has involuted properly during the puerperium, the neglect immediately to repair injuries to the pelvic floor, the failure to recognize the importance of gonorrhea in its earlier manifestations, and the popular methods of treating abortion, are all common factors that go to make gynecology a specialty.

19. **Fulminating Appendicitis.**—Inge's paper is largely a discussion of the methods of treatment advocated by Ochsner and Morris, with a report of two cases.

20. **Gonorrheal Arthritis.**—The subject is discussed in general by Frauenthal. Incidentally, he remarks that if the same zeal be displayed in seeking for gonococci as a cause of arthritis as there is for looking for uric acid and urates, possibly more cases of gonorrheal arthritis will be found.

New York Medical Journal.

May 13.

22 *Influence of Cobra Venom on the Proteid Metabolism. J. Scott, Edinburgh.
23 Principles of Manual Therapy. Its Application by the Physician. J. P. Arnold, Philadelphia.
24 *Urethroplastic Dislocation. C. Beck, New York.
25 *Skiagraphy of the Future. J. Rudis-Jicinsky, Cedar Rapids, Iowa.
26 When and How Should the Tuberculous Patient Be Treated? F. M. Pottenger, Monrovia, Ga.
27 Addition of Calcium Salts to Nutrient Broth. A Reliable and Convenient Method for Growing the Pneumococcus, Meningococcus and Certain Other Bacteria. C. Bolduan, New York.
28 Case of Digitalis Poisoning with Very Low Temperature Without Collapse—Recovery. W. N. Johnson, Philadelphia.
29 Immediate Abdominal Section. D. Lewis, Chicago. (Continued.)

22. **Influence of Cobra Venom.**—An extended series of observations has been carried on by Scott with reference to the effect of cobra venom on proteid metabolism. Dogs were used for this investigation. When the animal came into nitrogenous equilibrium, sublethal, and in some cases lethal, doses of cobra venom were injected subcutaneously. Scott found that practically no change in the rate of proteid metabolism was induced by the injection, in spite of well-marked local reaction. A slight decrease in the proportion of urea nitrogen, quite insignificant compared with that produced by diphtheria toxin and various drugs, was observed. A sight rise in the proportion of ammonia nitrogen occurred. There was a slight rise in the proportion of nitrogen purin bodies. The nitrogen in other compounds showed no constant change. The P_2O_5 excreted showed no constant change, but in two experiments there was a slight rise. The change produced in the proteid metabolism is, therefore, small, and as such is the case, being in the directions of decreased elaboration of urea and increase in the proportion of nitrogen excreted as ammonia, it seems to indicate a slight toxic action on the hepatic metabolism rather than a general action on the proteid changes; and tends to confirm the view that the poison acts chiefly on the nervous system.

24. **Urethroplastic Dislocation.**—The procedure described by Beck, known as urethroplastic dislocation, is carried out as follows: After the patient is brought into the lithotomy position, a medium-sized metal catheter is introduced and is gently pressed against the entrance of the strictured area. If firmly held by an assistant, it will serve as a landmark. The indurated area is now exposed by a three-inch incision made in the raphe. The tissues are divided step by step until the urethra is reached. The sclerotic area generally extends into the neighboring perineal muscles. After its length is ascertained, the urethra is grasped with toothed forceps, raised and carefully freed from the surrounding tissues. After isolation is perfect, and not until then, the indurated portion is exsected at its central as well as it peripheral ends. The urethral stumps are now caught with silk ligatures so that they can be pulled forward and further mobilized until they can be placed in apposition. If mobilization of the central end offers any technical difficulties, a large catheter is introduced and serves as a handle during dissection. After the mucous membranes of both urethral ends are united with the fine catgut sutures, a large rubber catheter, provided with a shield, is introduced and fastened at the top of the glans. A row of periurethral sutures is then added, and the skin wound is closed with interrupted silk sutures. No wound drainage is used.

25. **Skiagraphy.**—This paper is essentially a description of improved technic. The apparatus described is the author's protector, a home-made combination of a protective screen and shield, mask, and a lead box, with diaphragm and a metal cylinder and specula for precluding the diffused x-rays. The device may be used with great advantage in therapeutic work, in diagnosis, in fluoroscopic examination and in skiagraphy, giving most excellent results not obtainable without it. During the whole exposure of a patient the tube may be observed in action anteriorly and posteriorly, without disturbing the patient. In this way the patient and operator are protected in prolonged exposures. A burn is not possible. Any tube of a good make works with this attachment more steadily, the spreading of the rays when the tube becomes high in vacuum is avoided, and so-called concentration becomes possible, giving the illumination of the part exposed only. The illumination can be regulated at will. The whole arrangement and accessories to the protector weigh only about one pound and one ounce, and are easily portable with the tube, and in the same compartment, or the same box without other attachment.

Boston Medical and Surgical Journal.

May 11.

30 Infections of the Respiratory Tract with Influenza Bacilli and Other Organisms; Their Clinical and Pathologic Similarity and Confusion with Tuberculosis. F. T. Lord, Boston.
31 **Perforated Duodenal and Gastric Ulcers*; a Report of Two Cases; Operation; Recovery. C. L. Scudder, Boston.
32 *Suggestions in Regard to the Diagnosis of Seminal Vesiculitis. H. Cabot, Boston.
33 Report of a Case of Exstrophy of the Bladder, with a Consideration of Operative Treatment. H. G. Spooner, New York.

31. **Perforated Duodenal and Gastric Ulcers.**—Scudder records two cases of ulcer of the gastrointestinal canal. One case was an ulcer of the stomach. The other case was an ulcer of the duodenum. Both ulcers perforated, causing acute peritonitis. The first patient was operated on four hours after the initial sign of perforation. The second patient was operated on forty-eight hours after perforation. It was thought previous to operation that the patient had an appendicitis and a general peritonitis. Both the ulcers were closed by sutures. The peritoneal cavity in each instance was quickly cleansed by salt flushing and wiping. Cigarette and tube drains were used for a few days only in each case. Both patients recovered. In each case at a subsequent time a posterior gastrojejunostomy was done. The anastomosis was made close to the ligament of Treitz. Both patients recovered from the second operation, and are well to-day.

32. **Diagnosis of Seminal Vesiculitis.**—The technic adopted by Cabot for the purpose of demonstrating the presence or absence of pus in any noticeable amount in the cavity of the vesicle is as follows: Patients are instructed to come with a full bladder, and this is first emptied, in order to obtain a general idea of the amount of pus in the urethra. The urethra is then irrigated with boric acid solution, and 4 or 5 oz. allowed to run back into the bladder, which is then emptied. In this way the urethra is rendered as clean as possible. The bladder is then again distended with boric acid or salt solution, and the prostate massaged, leaving the region of the vesicle undisturbed. A varying amount of prostatic fluid can be expressed so as to flow from the meatus, but this is not to be regarded as the whole expressed contents, as a certain amount will flow back into the bladder, depending, probably, on the condition of the posterior urethra. If, now, the patient empties the bladder, as much has been done as possible to eliminate contamination from neighboring organs. The bladder is then a third time distended and the vesicles massaged, expressing the contents as thoroughly as possible. By this massage, a variable amount of vesicular contents is expressed so as to come out at the meatus, but in many cases the major portion of it runs back into the bladder and is passed when that viscus is emptied. By using this routine an approximately accurate idea of the contents of the vesicle can be obtained and it is obtained moderately free from contamination.

Lancet-Clinic, Cincinnati.

May 6.

34 *After-Treatment in Abdominal Operation. H. J. Whitacre, Cincinnati.
35 Treatment of So-called Incurable Chronic Disorders by the Physiologic Method. J. H. Kellogg, Battle Creek, Mich.
36 Death Through Misadventure. W. W. Vinnedge, La Fayette, Ind.
36½ Urethrorrhea. E. Harlan, Cincinnati.

34. **After-Treatment in Abdominal Operation.**—The chief points made by Whitacre are: 1. The importance of the face mask as an additional safeguard. 2. The prevention of postoperative vomiting by the stomach irrigation. 3. The avoidance of shock by minimizing the injury. 4. The high value of salt solution per rectum in re-establishing kidney function and in contributing to the comfort of the patient. 5. A prolonged period of convalescence will restore the patient most promptly to a normal state of health.

Memphis Medical Monthly.

May.

37 Facts Versus Theory in the Treatment of Pneumonia. J. L. McLean, Memphis.
38 Lobar Pneumonia and Its Sequelæ; Report of Cases. W. T. Black, Memphis.
39 Further Remarks on the Etiology of Blackwater Fever. J. B. McElroy, Memphis.
40 Ulceration of the Cornea in General Diseases. E. C. Elliott, Memphis.
41 Cough from Causes Outside of the Lungs. J. W. Price, Memphis.
42 *Technic of the Operation for Appendicitis. J. E. Johnson, Memphis.

42. **Operation for Appendicitis.**—The technic prescribed by Johnson is very nearly that used by Morris. After the usual preparation, he begins by taking up a fold of skin and fat between the thumb and index finger, and divides it down to the external oblique. The points of the closed scissors are now pressed through the external oblique, and by opening. split the muscle (aponeurosis in this location) to correspond with the opening of the skin. The internal oblique and transversalis are treated in the same way as the external oblique. The peritoneum is divided between the two forceps, and a strand of No. 2 catgut is passed through one end of the incision and tied. This suture is to be used for drawing up the peritoneum and for closing. The appendix is now tied off close to the bowel and removed; the stump is touched with carbolic acid. The cuff of peritoneum is sutured by what is practically a double Lembert suture. This suture is tied and the ends used as a retractor, while a pouch-string suture is introduced, by beginning half an inch from the appendix, and including part of the peritoneal covering of the bowel, all around. The space between this suture and the suture already tied is scarified with a needle. The ends of the suture in the cuff are now cut off, and as the pouch-string suture is tightened, the stump is pressed back into the bowel. The exposed portion is washed with salt solution and returned to the abdomen. This method of handling the stump has several advantages over simply tying a ligature around and cutting off the appendix, viz., it prevents leaking; there is less appendix left, which might slough; if it does slough, it is inside of the bowel; the peritoneal surfaces are directly together, and do not have to depend on pressure atrophy to bring them together; the peritoneal surface of the bowel, half an inch from the appendix, is brought over the stump; there is no exposed stump to cause adhesions. The closure is begun by drawing back the muscles with tenacula and with a curved needle, and the catgut, already tied into the peritoneum, closes the peritoneum, using a continuous suture. Tie and cut off the suture. With the tenaculum draw the two outer muscles toward the median line and begin the suture in the transversalis, allowing the muscles to come toward the outside as the suturing continues. By retracting in the direction of the split that is being closed, the opening can be kept over the part of the incision that is being sutured, thus giving plenty of room. The muscles move freely over each other and can be retracted for a considerable distance. The internal and external oblique are sutured in like manner, using plain No. 1 catgut. The skin is closed by a subcuticular suture of plain No. 1 catgut and covered with collodion. The advantages of this incision are self-evident. No muscles are cut, they are split. There is no cicatrix binding all of the muscles together and acting as a splint, as in the straight through cut. There is less risk of hernia; there is less pain; the healing is quicker; the scar is hardly noticeable. The patient is allowed to turn over at will, from the first, and may be allowed to leave the bed in from five to seven days.

Brooklyn Medical Journal.

May.

43 *Surgical Treatment of Cirrhosis of the Liver. R. S. Fowler, New York.
43½ 'Clinical Study of Abscess of Lung. W. H. Rankin.
44 Case of Esophageal Pouch. W. C. Wood.
45 Purulent Ophthalmia. J. C. Hancock.
46 Pelvic Condition of Primiparæ When They Are Discharged from the Physician's Immediate Care. A. M. Judd.
47 "Growing Pains" Fallacy. R. W. Westbrook.
48 Report of Two Cases of Maternal Impression. R. E. Coughlin.

43. **Surgical Treatment of Cirrhosis of Liver.**—The operative procedure employed by Fowler is as follows: After the usual preparation of the patient for anesthesia and abdominal section, the abdomen is tapped some hours before the time set for the operation, preferably the night before, and as much fluid as possible drawn off. This relieves the respiratory embarrassment and so conduces to a safer anesthesia. The patient having been anesthetized, the abdomen is opened by a median incision, reaching from the ensiform cartilage to halfway between the umbilicus and the pubes. The edges of the wound are widely retracted and the peritoneal cavity is thoroughly dried. Every particle of fluid is sponged away. This is not done gently, but roughly, with large, coarse laparotomy pads. The peritoneum is scrubbed with a crash sponge. The upper portion of the liver is scraped with a scalpel, as is also the peritoneum covering the diaphragm. The freshening of the surfaces is completed by going over them roughly with a small piece of crash toweling grasped in a stick sponge holder. The surface of the spleen is likewise abraded, but not as roughly as the liver surface. The next step consists in shortening the round ligament of the liver by taking pleats in it and suturing it to the parietal peritoneum and rectus muscle. This holds the liver in closer apposition to the diaphragmatic peritoneum. To make the approximation more complete, the anterior edge of the liver is sutured to the parietal peritoneum. All sutures are interrupted and of chromic catgut in round needles. Following this, one edge of the wound is widely retracted, and the omentum is sewn to the parietal peritoneum in a line across the abdomen and up to the wound margin. The same procedure is carried out on the opposite side. The first sutures placed are those furthest from the wound. The peritoneum is again dried, and the wound closed with cross sutures of silkworm gut, fastened through rubber bolsters. The skin is sutured with a continuous chain-stitch of silk. The subsequent dressing and treatment is that usually employed in laparotomy cases in which the intestinal canal has not been invaded.

New York State Journal of Medicine, New York.

May.

49 Prostatic Hypertrophy. W. B. Jones, Rochester, N. Y.
50 *Alexander Operation; Its Results, Immediate and Remote. J. E. King, Buffalo, N. Y.
51 *How and When to Use Antitoxin in Diphtheria. C. G. Kerley, New York.
52 Gynecologic Importance of Prolapsed Kidney. A. H. Goelet, New York.
53 Passing of the Old Physician. E. Lester, Seneca Falls, New York.
54 Diarrhea and Bowel Troubles in Infants and Adults. B. W. Stearns, Binghamton, N. Y.
55 Infantile Cerebral Palsy in Its Relation to Epilepsy. E. Sharp, Katonah, N. Y.
56 Symptoms of Cerebrospinal Meningitis. G. H. Fish, Saratoga Springs, N. Y.
57 Observations on the Use of Forceps. E. M. Scofield, Jamestown, N. Y.
58 Clinical Features and Treatment of Epidemic Cerebrospinal Meningitis. F. Huber.

50. **Alexander Operation.**—A word is said in favor of this procedure by King, who believes that recurrence of the pathologic condition for the relief of which the patient is operated on by this procedure should be very rare, if the technic of the operation be varied according to what in the judgment of the surgeon seemed to be the requirements of the case, as determined by the size of the ligaments. When all is said and done, concludes King, it must be admitted that the Alexander operation has a prominent place in the treatment of uncomplicated retroversion.

51. **Antitoxin in Diphtheria.**—Kerley emphasizes the fact that the dosage of antitoxin is not fixed by the age of the patient, but by the severity of the infection and the duration of the disease when first seen. One child may require three thousand units of the antidote; another, 30,000 units.

American Practitioner and News, Louisville.

May.

59 William Osler—An Address. J. W. Irwin.
60 Syphilis. J. M. Morris.
61 *Cystitis. S. S. Prather.
62 *Cesarean Section for Myoma-Uteri Obstructing the Entire Pelvic Outlet. F. W. Samuel.
63 *Observations and Conclusions in Obstetrics. W. A. Keller.
64 *Points on Surgery of the Gall Bladder. L. P. Spears.

61. **Cystitis.**—In acute cystitis, Prather advocates no irrigation, soothing drinks, antiseptics, sedatives, hot applications to the pubes and rest in bed. For chronic cystitis, irrigation, stimulation. antiseptics and moderate exercise.

62. **Cesarean Section for Myoma Uteri.**—Samuel's paper is a review of this subject, with the indications and limitations as to treatment, and the report of one case.

63. **Observations in Obstetrics.**—Attention is directed by Keller to a few points in connection to the practice of obstetrics that bear frequent repetition. He says that the more the obstetrician follows nature, the better will be his results. Assist nature as much as possible without interference. More times harm has been done by trying to do too much than by not doing enough. In applying forceps, be sure of an empty bladder, and the position of the fetus; or get some one to put them on that does know the position. It is imperative to examine the perineum after all deliveries, and it is always well to give the patient a dose of ergot after the third stage of labor.

64. **Surgery of the Gall Bladder.**—For the treatment of cholelithiasis, Spears advocates cholecystostomy as the only conservative procedure in these cases, except where empyema or subsequent rupture and infection have taken place, in which case cholecystectomy is the best procedure, allowing that the common duct is not obstructed. Four cases are reported.

Milwauke Medical Journal.

April.

65 *Treatment of Retro-Displacements of the Uterus. C. A. Stewart, Duluth, Minn.
66 Juglandin. W. F. Waugh, Chicago.
67 Diagnosis of Extrauterine Pregnancy. J. Bruess, Milwaukee.

65. **Retrodisplacements of the Uterus.**—Some modifications of the methods generally practiced for the relief of retrodisplacements of the uterus have been made by Stewart, which simplify the procedure, and at the same time secure permanency of results. After breaking up adhesions the uterus is replaced in position and each round ligament is caught by a uterine tenaculum at a distance of from one to one and one-half inches from the uterus, depending on the amount of slack that the replacement of the uterus leaves in the ligament. Gentle traction is then made, sufficient to make the ligaments taut, when it will be seen that the vesico-uterine peritoneum has been lifted up so that it forms a sulcus. The sides of this furrow are overlapped and stitched together with a fine catgut suture which, as it approaches the round ligaments, tends to draw them together so that when it is completed the two ligaments are in close juxtaposition. The loop formed by the slack in the round ligaments is then stitched together with chromic catgut, after which they are folded over toward each other, fastened together and to the anterior aspect of the uterus. A reasonably extensive experience has convinced Stewart that his method possesses certain points of excellence that entitle it to consideration, such as ease and facility of execution, the certainty of securing equable support to the uterus by the uniformity of traction on each round ligament. and the added element of strength afforded by stitching the folds of peritoneum together so that they are able to aid in giving support to the replaced organ.

St. Louis Medical Review.

May 6.

68 Diagnosis of the Pneumonias. L. Litchfield, Pittsburg, Pa.
69 Pathology of the Pneumonias. J. C. Lange, Pittsburg, Pa.

Vermont Medical Monthly, Burlington, Vt.

March 25.

70 Epidemic Influenza in the Etiology of Certain Diseases. W. N. Bryant, Ludlow.
71 Hysterectomy for Fibroid Tumor of the Uterus; Recovery. A. L. Smith, Montreal.
72 Febricula. W. F. Waugh. Chicago.
73 Cancer of the Uterus. C. E. Chandler, Montpelier, Vt.
74 Treatment of Menstrual Disorders: with Special Reference to Cases in Women Suffering from Mental Diseases. G. S. Walker, Staunton, Va.

Detroit Medical Journal.

March.

75 Cancer and Sarcoma as Affected by Locality. T. A. McGraw, Detroit.
76 General Vibratory Massage. C. Sandzen, Kansas City, Mo.
77 Facial Erysipelas. G. W. Spohn. Elkhart, Ind.
78 Deformities of the Feet Corrected by Elastic Screw and Solid Pressure. V. L. Smith, Detroit, Mich.

April.

79 Hackley Hospital—A Model for Small Cities. F. W. Garber. Muskegon, Mich.
80 Case-History Clinic. R. C. Cabot, Boston, Mass.
81 Differential Diagnosis and Treatment of the Chronic Non-Tubercular Joint Diseases. W. E. Blodgett, Detroit, Mich.

Journal of Advanced Therapeutics, New York.

May.

82 Certain Theoretical and Practical Considerations on the Use of High-Frequency Currents. M. W. Brinkmann.
83 Report of the Committee on Current Classification and Nomenclature. W. J. Jenks and C. I. Clark.
84 Consideration of Some Electrical Modalities with Cases Bearing Thereon. J. H. R. Bond.
85 Contribution to the Knowledge of the Radio-Activity of the X-Ray Tuber. O. Juettner.

Medical Fortnightly, St. Louis.

May 10.

86 Conservative Treatment of Chronic Middle Ear Suppuration. F. R. Packard, Philadelphia.
87 Eradication of Syphilis and Gonorrhea. J. H. Adams, Paoli, Pa.
88 Thorns Among the Roses of a Specialist's Life. A. L. Benedict, Buffalo.
89 Anatomic Eponyms. R. S. Gregg, Chicago.

Buffalo Medical Journal.

May.

90 Traumatic Tetanus. C. Bentx, Buffalo, N. Y.
91 Pendulous Abdomen. J. P. Creveling, Auburn, N. Y.
92 Quarantine. F. H. Sawers, Rochester, N. Y.

Louisville Monthly Journal of Medicine and Surgery.

May.

93 Symptoms of Surgical Lesion in the Upper Right Abdomen. H. Grant, Louisville.
93½ Cesarean Section, Ectopic Gestation, Desmoid-Sarcoma and Uterine Fibroid. L. Frank, Louisville.
94 Tension—Its Relation to the Physical Organization. J. Glahn, Owensboro.

Cleveland Medical Journal.

May.

95 Anti-Tuberculosis Movement in Cleveland. J. H. Lowman, Cleveland.
96 Nutrition in Tuberculosis. J. P. Sawyer, Cleveland.
97 Mental Side of the Consumptive. G. H. Fitzgerald, Albuquerque, N. Mex.

California State Journal of Medicine, San Francisco.

May.

98 Thirty-Fifth Annual Meeting of the Medical Society of the State of California. F. L. Adams, Oakland.
99 Notes on Recent Progress in the Surgery of the Ear and Brain. A. Barkan, San Francisco.
100 Use of Benzoylvinyl-Diacetone-Alkamine (Beta-Eucain) Lactate in Eye, Nose and Throat Work. H. B. Ellis, Los Angeles.
101 Case of Primary Carcinoma of the Lung. H. Herbert, Los Angeles.
102 Tendon Transplantation. F. Lange, Munich.
103 Nephrotomy for Stone in the Kidney. C. M. Cooper and W. I. Terry, San Francisco.
104 Osteomalacia. C. S. Stoddard, Santa Barbara.
105 Fractures of the Anatomic Neck of the Humerus. T. L. Loofburrow, Eureka.
106 Recurrent Eclampsia. O. B. Spalding, Yreka.

Journal of Experimental Medicine.

April.

107 Study of the Changes in the Blood and Blood-Forming Organs Produced by Cytotoxic Sera, with Special Reference to Hemolymphotoxin. H. Woltmann.
108 Artificial Anastomosis Between the Portal Vein and the Vena Cava Inferior—Eck's Fistula. J. E. Sweet, New York.
109 A Second Coagulation of the Blood Due to a Substance That Is Not Identical with Fibrinogen and Is Coagulable by Saturation with Neutral Oxalate. E. T. Reichert.
110 Comparative Statistics of Antitoxin Horses. A Study of the Records of One Hundred Horses Immunized to Diphtheria Toxin, with Composite of Curves. W. R. Hubbert, Detroit, Mich.
111 Observations on Endothelial Separation in the Smaller Arteries and Veins. C. G. Farnum.
112 Study of the Protective Action of Snake Venom on Blood Corpuscles. H. Noguchi.
113 Method for Obtaining Mass Cultures of Bacteria for Inoculation and for Agglutination Tests. P. H. Hiss, Jr.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.

May 20.

1 *Etiology of Carcinoma. G. T. Beatson, M.D., Edinburgh.
2 *Malignant Disease of the Fundus Uteri. A. J. Cleveland and D. D. Day.
3 *Points of Incidence Compared in Cancer, Leucoderma and Scleroderma. G. L. Cheatle.
4 Cinnamic Salts in the Treatment of Cancer. L. Drage, Hatfield.

Memphis Medical Monthly.

May.

37 Facts Versus Theory in the Treatment of Pneumonia. J. L. McLean, Memphis.
38 Lobar Pneumonia and Its Sequelæ; Report of Cases. W. T. Black, Memphis.
39 Further Remarks on the Etiology of Blackwater Fever. J. B. McElroy, Memphis.
40 Ulceration of the Cornea in General Diseases. E. C. Elliott, Memphis.
41 Cough from Causes Outside of the Lungs. J. W. Price, Memphis.
42 *Technic of the Operation for Appendicitis. J. E. Johnson, Memphis.

42. **Operation for Appendicitis.**—The technic prescribed by Johnson is very nearly that used by Morris. After the usual preparation, he begins by taking up a fold of skin and fat between the thumb and index finger, and divides it down to the external oblique. The points of the closed scissors are now pressed through the external oblique, and by opening, split the muscle (aponeurosis in this location) to correspond with the opening of the skin. The internal oblique and transversalis are treated in the same way as the external oblique. The peritoneum is divided between the two forceps, and a strand of No. 2 catgut is passed through one end of the incision and tied. This suture is to be used for drawing up the peritoneum and for closing. The appendix is now tied off close to the bowel and removed; the stump is touched with carbolic acid. The cuff of peritoneum is sutured by what is practically a double Lembert suture. This suture is tied and the ends used as a retractor, while a pouch-string suture is introduced, by beginning half an inch from the appendix, and including part of the peritoneal covering of the bowel, all around. The space between this suture and the suture already tied is scarified with a needle. The ends of the suture in the cuff are now cut off, and as the pouch-string suture is tightened, the stump is pressed back into the bowel. The exposed portion is washed with salt solution and returned to the abdomen. This method of handling the stump has several advantages over simply tying a ligature around and cutting off the appendix, viz., it prevents leaking; there is less appendix left, which might slough; if it does slough, it is inside of the bowel; the peritoneal surfaces are directly together, and do not have to depend on pressure atrophy to bring them together; the peritoneal surface of the bowel, half an inch from the appendix, is brought over the stump; there is no exposed stump to cause adhesions. The closure is begun by drawing back the muscles with tenacula and with a curved needle, and the catgut, already tied into the peritoneum, closes the peritoneum, using a continuous suture. Tie and cut off the suture. With the tenaculum draw the two outer muscles toward the median line and begin the suture in the transversalis, allowing the muscles to come toward the outside as the suturing continues. By retracting in the direction of the split that is being closed, the opening can be kept over the part of the incision that is being sutured, thus giving plenty of room. The muscles move freely over each other and can be retracted for a considerable distance. The internal and external oblique are sutured in like manner, using plain No. 1 catgut. The skin is closed by a subcuticular suture of plain No. 1 catgut and covered with collodion. The advantages of this incision are self-evident. No muscles are cut, they are split. There is no cicatrix binding all of the muscles together and acting as a splint, as in the straight through cut. There is less risk of hernia; there is less pain; the healing is quicker; the scar is hardly noticeable. The patient is allowed to turn over at will, from the first, and may be allowed to leave the bed in from five to seven days.

Brooklyn Medical Journal.

May.

43 *Surgical Treatment of Cirrhosis of the Liver. R. S. Fowler, New York.
43½ Clinical Study of Abscess of Lung. W. H. Rankin.
44 Case of Esophageal Pouch. W. C. Wood.
45 Purulent Ophthalmia. J. C. Hancock.
46 Pelvic Condition of Primiparæ When They Are Discharged
from the Physician's Immediate Care. A. M. Judd.
47 "Growing Pains" Fallacy. R. W. Westbrook.
48 Report of Two Cases of Maternal Impression. R. E. Coughlin.

43. **Surgical Treatment of Cirrhosis of Liver.**—The operative procedure employed by Fowler is as follows: After the usual preparation of the patient for anesthesia and abdominal section, the abdomen is tapped some hours before the time set for the operation, preferably the night before, and as much fluid as possible drawn off. This relieves the respiratory embarrassment and so conduces to a safer anesthesia. The patient having been anesthetized, the abdomen is opened by a median incision, reaching from the ensiform cartilage to halfway between the umbilicus and the pubes. The edges of the wound are widely retracted and the peritoneal cavity is thoroughly dried. Every particle of fluid is sponged away. This is not done gently, but roughly, with large, coarse laparotomy pads. The peritoneum is scrubbed with a crash sponge. The upper portion of the liver is scraped with a scalpel, as is also the peritoneum covering the diaphragm. The freshening of the surfaces is completed by going over them roughly with a small piece of crash toweling grasped in a stick sponge holder. The surface of the spleen is likewise abraded, but not as roughly as the liver surface. The next step consists in shortening the round ligament of the liver by taking pleats in it and suturing it to the parietal peritoneum and rectus muscle. This holds the liver in closer apposition to the diaphragmatic peritoneum. To make the approximation more complete, the anterior edge of the liver is sutured to the parietal peritoneum. All sutures are interrupted and of chromic catgut in round needles. Following this, one edge of the wound is widely retracted, and the omentum is sewn to the parietal peritoneum in a line across the abdomen and up to the wound margin. The same procedure is carried out on the opposite side. The first sutures placed are those furthest from the wound. The peritoneum is again dried, and the wound closed with cross sutures of silkworm gut, fastened through rubber bolsters. The skin is sutured with a continuous chain-stitch of silk. The subsequent dressing and treatment is that usually employed in laparotomy cases in which the intestinal canal has not been invaded.

New York State Journal of Medicine, New York.

May.

49 Prostatic Hypertrophy. W. B. Jones, Rochester, N. Y.
50 *Alexander Operation; Its Results, Immediate and Remote. J. E. King, Buffalo, N. Y.
51 *How and When to Use Antitoxin in Diphtheria. C. G. Kerley, New York.
52 Gynecologic Importance of Prolapsed Kidney. A. H. Goelet, New York.
53 Passing of the Old Physician. E. Lester, Seneca Falls, New York.
54 Diarrhea and Bowel Troubles in Infants and Adults. B. W. Stearns, Binghamton, N. Y.
55 Infantile Cerebral Palsy in Its Relation to Epilepsy. E. Sharp, Katonah, N. Y.
56 Symptoms of Cerebrospinal Meningitis. G. H. Fish, Saratoga Springs, N. Y.
57 Observations on the Use of Forceps. E. M. Scofield, Jamestown, N. Y.
58 Clinical Features and Treatment of Epidemic Cerebrospinal Meningitis. F. Huber.

50. **Alexander Operation.**—A word is said in favor of this procedure by King, who believes that recurrence of the pathologic condition for the relief of which the patient is operated on by this procedure should be very rare, if the technic of the operation be varied according to what in the judgment of the surgeon seemed to be the requirements of the case, as determined by the size of the ligaments. When all is said and done, concludes King, it must be admitted that the Alexander operation has a prominent place in the treatment of uncomplicated retroversion.

51. **Antitoxin in Diphtheria.**—Kerley emphasizes the fact that the dosage of antitoxin is not fixed by the age of the patient, but by the severity of the infection and the duration of the disease when first seen. One child may require three thousand units of the antidote; another, 30,000 units.

American Practitioner and News, Louisville.

May.

59 William Osler—An Address. J. W. Irwin.
60 Syphilis. J. M. Morris.
61 *Cystitis. S. S. Prather.
62 *Cesarean Section for Myoma-Uteri Obstructing the Entire Pelvic Outlet. F. W. Samuel.
63 *Observations and Conclusions in Obstetrics. W. A. Keller.
64 *Points on Surgery of the Gall Bladder. L. P. Spears.

61. **Cystitis.**—In acute cystitis, Prather advocates no irrigation, soothing drinks, antiseptics, sedatives, hot applications to the pubes and rest in bed. For chronic cystitis, irrigation, stimulation, antiseptics and moderate exercise.

three and a half inches from the anus and was freely movable. A skin incision was made from the fourth sacral spine to the tip of the coccyx, and all structures were divided down to the bone. The coccyx was removed, but the sphincters were left untouched, and a portion of the sacrum was taken away by bone forceps. The rectum was freed above and below the growth, the peritoneum being freely opened. A stout silk ligature was passed round the bowel above the growth, and the rectum was divided and turned down and again divided below the growth, about three inches of bowel being removed. The two ends could not be united, but one or two sutures approximated the cut surfaces anteriorly, and then the upper end was sutured to the sacral opening. The remainder of the incision was closed with silkworm-gut sutures after the wound had been thoroughly irrigated and packed with iodoform gauze. A large tube was passed into the bowel and packed round with iodoform gauze. The patient made a good recovery and he has now, to all intents and purposes, a normal rectum with perfect sphincteric control and is in excellent health. The wound was irrigated twice daily after the first 48 hours with either saline or boric solution; as few stitches as possible were applied to the approximated edges in order that drainage might be as free as possible; the greatest care was taken to divide the bowel well above the growth, when possible well below it, and to avoid infecting the wound from the bowel (this was avoided by ligatures and guards); the patient sat up in bed as soon as possible for better drainage from the wound. The fact that perfect control and practically normal sensation were obtained after such an operation is particularly interesting.

13. **Effects of Bath and Electricity on Metabolism, Blood and Blood Pressure.**—Bain and Frankling summarize the results of their investigations as follows: The physiologic action of the high-frequency current in its general application tends to confirm its use in cases of nutritional disorders, such as chronic gout, chronic rheumatism and obesity, by reason of the changes effected in blood pressure and the stimulus given to metabolism, as shown by the plus heat production, the plus excretion of urea, of uric acid and of CO_2 and the loss of weight. The rise produced in the hemoglobin value of the corpuscle points to its use in the above cases when anemia is a prominent symptom and also as a useful adjunct in cases of simple anemia and chlorosis. The distinct contraction of unstriped muscle fiber excited by the effleuve indicates a trial of the method in cases of atony of the hollow viscera, and may also account for the striking results sometimes observed in the shrinking and disappearance of hemorrhoids after repeated applications. The evidence of its real value in cases of diabetes and phthisis does not appear to rest on a sufficiently large number of cases to carry conviction as to its superiority over other modes of treatment. With regard to its action in local affections of the nerves and skin. results offer no evidence for or against. Electric immersion baths are used largely to induce restoration of contractile power in cases of muscular weakness or atrophy resulting from nerve lesions or essential muscular dystrophy, and in cases of neurasthenia and the latent form of hysteria. They are also useful as a general tonic measure in cases presenting no definite disease, but suffering from slackness and want of tone. The results obtained on metabolism are not sufficiently striking to justify the frequent employment of these baths in cases of chronic gout unless the slight increase in elimination of urea and uric acid which followed the constant current may be considered an indication in this direction. The striking results obtained on the hemoglobin value of the blood with the light and ozone bath point to its use in cases requiring sweating baths. in which anemia is present, and further tend to show that the daily breathing, for a stated time, of air highly charged with ozone may be a useful auxiliary measure in the treatment of intractable cases of chlorosis and secondary anemia. Peat baths are largely used in cases of chronic pelvic disorder of an inflammatory nature. Their action, which resembles that of a widespread poultice, materially aids in the absorption of effused products. They are also used for cases of chronic intractable rheumatism and gout and in local manifestations of these disorders, such as lumbago or sciatica. The results obtained are not conclusive enough to indicate strongly in which direction they are likely to be of service. Thermal sulphur baths are largely used at Harrogate in the treatment of gout, rheumatism and functional derangements of the liver and also for their local action on the skin in cases of skin diseases. In the former, as well as in the latter, experience shows that they are of undoubted value, though their mode of action is by no means clear. Apart from their marked effect on blood pressure, which has been previously shown, this investigation proved nothing conclusive as to their influence on metabolism.

17. **Serum Treatment of Tetanus.**—Stoney's cases present a marked contrast to one another. In both the incubation period was long—in the first case 17 days and in the second case probably 18 days. In both the temperature was normal on the first appearance of the symptoms, in the second case it remained normal throughout the course of the disease; but in the first case after a preliminary fall it rose rapidly to 102 F. in 20 hours. In both cases the treatment was the same —i. e., injection of serum and the administration of large doses of bromid of potassium and chloral hydrate by the rectum. In the one case death occurred within 60 hours of the onset of the first symptom, whereas the second patient recovered. In the first case, the spasms were both frequent and severe, while in the second only one was observed. The only conclusion to be drawn from these two cases is that the result was due to the degree of infection and was not materially altered by the treatment.

Presse Médicale, Paris.

18 (No. 30, April 15.) L'ankylostomiase cutanée. W. Dubreuilh.
19 Drinking.—La boisson qualitativement et quantitativement envisagée chez les malades et les gens bien portants. H. Labbé.
20 *Un sou dans l'esophage. A. Broca.
21 (No. 31.) Le rôle du sucre dans l'alimentation (sugar). G. H. Lemoine.
22 Traitement électrique de la sciatique. C. N. de Blois (Trois-Rivières, Canada).
23 (No. 32.) Circulaire de propagande du Congrès International de la Tuberculose de 1905.
24 Amélioration spontanée survenue dans un cas d'ostéomalacie masculine arrivé aux déformations les plus extrêmes avec complications de lithiase vésicale et rénale. Berger.
25 *Traitement du mycosis fongoide par la radiothérapie. J. Belot.

20. **A Coin in the Esophagus.**—Broca rather ridicules the complicated measures advocated for the extraction of a coin that has lodged in the esophagus. He thinks a penny can be readily extracted with the Graefe extractor, a little basket swinging on a crossbar at the end of a whalebone. He shows by four illustrations what to do and what not to do, and states that he has extracted more than a hundred coins in this way with only one mishap, which occurred at the beginning of his practice. He inserts his left forefinger to guide and to bend the extractor as it enters the throat. When he begins to withdraw the instrument he pushes his finger down to meet it, and if it has caught the coin he works his finger over the coin until it fits into the space between nail and pulp of his finger. He then withdraws the extractor and the coin comes out safely without the slightest injury to the walls of the esophagus. The penny usually lodges at an accessible point in children at the penny-swallowing age.

25. **Radiotherapy of Fungoid Mycosis.**—The illustrations before and after show the complete objective cure of a severe case of fungoid mycosis of long standing. The patient was a woman of 39 and she was given daily exposures to the Roentgen rays, never surpassing the dose of 9 H unities for a single tumor at a sitting. For more than a year she thus absorbed from 5 to 7 H units a day, or a total of 1,200, without inconvenience of any kind, and with the final retrogression of all lesions, and no recurrence since her return home in August. 1903. The tormenting pruritus ceased almost at once after the exposures, within three days at latest.

Berliner klinische Wochenschrift.

26 (XLII, No. 14. April 3.) *Dropsy of Renal Origin.—Experimentelles über die Nierenwassersucht. P. F. Richter.
27 *Beitrag zur Behandlung der Ankylostomiasisanämie und der Tropen-Anämien. O. Liermberger.
28 *Beziehungen der Balneologie zur Chirurgie (relation between). F. Krause. (Concluded.)

perfectly than the fingers. It consists of two thin-walled metal cylinders about 4 cm. in diameter by 7 cm. long. They are connected by a wire a few inches long which is crossed just above the cylinders, thus acting like a weak spring to hold them in contact. He has recently been surprised at the remarkable efficacy of atropin in certain serious cases of ileus not due to mechanical obstruction. One case was in a man of 81. The operation showed the intestine to be distended with commencing peritonitis, no peristalsis, no mechanical obstacle. Four injections of 1 mg. of atropin sulphate each caused a movement of the bowels and, after the fifth, abundant stools. The ileus recurred a few days later, but was again conquered by the same measures. These experiences impelled him to try these large doses of atropin in the paralysis accompanying perforation peritonitis when an operation had shown that the ileus was not due to mechanical obstruction. One patient was a young man with diffuse suppurative peritonitis, pulse 140 and fever 39.7 C., with albuminuria. The operation was followed by marked improvement, but ileus developed. A fistula was made in the cecum and atropin injected, with restoration of the bowel movements and recovery. These four patients received each from 5 to 7 mg. of atropin sulphate in from twelve to fifteen hours, and tolerated it without mishap.

47. **New Method of Sterilizing Catgut.**—Bartlett's method consists in drying the catgut, placing it in liquid paraffin until it becomes transparent, about twelve hours, then heating to 160 C., and then setting aside in a 1 per cent. methyl alcohol solution of iodin. A year's experience and countless tests, he states, have proved the superiority of catgut sterilized by this simple, inexpensive technic.

48. **Ectopic Testicle.**—Lanz reviews his experience with 51 operations on account of retained or ectopic testicle. The testicle was retained in two brothers in one family. He has never noticed any indications of peritoneal adhesions suggesting fetal peritonitis. He removed the retained testicle in a fifth of the cases as it was atrophied, or impossible to transplant. In one case, the testicle was apparently normal and active spermatogenesis was evident. In 2 cases, he found a clump of atypical glandular epithelial elements in the testicle, corroborating the assumption of a tendency to malignant disease on the part of ectopic testicles. In 8 cases of retention, he applied elastic extension. He passed a thread up through the scrotum, around the gubernaculum at the lower pole of the testicle, including the tunica albuginea, and brought the thread down and out, fastening it to the inside of the thigh with adhesive plaster or to a crossbar between the thighs, held in a plaster cast. He used an elastic band for the thread, and has been well pleased with the constantly favorable results of this elastic extension of the ectopic testicle.

Centralblatt f. Gynäkologie, Leipsic.

Last indexed page 1648.

49 (XXIX, No. 14.) Blood-Forming Organs in Pregnancy and Childbirth.—Die blutbildenden Organe während der Schwangerschaft und dem Wochenbett. F. Varaldo.
50 (No. 15.) Instrument und Methode Bossi. H. v. Bardeleben.
51 Lack of Oxygen or Carbonic-Acid Poisoning.—Sauerstoffmangel oder Kohlensäurevergiftung. A. Schücking.
52 *Myomotomie in der Schwangerschaft (pregnancy). C. H. Stratz.
53 (No. 16.) Zur Dienst'schen Eklampsie-Theorie. W. Liepmann. See ab. 83, page 1649.
54 Comparative Study of *Pelves and Childbearing* in Whites and Blacks.—Eine vergleichende Studie über die Becken von Weissen und Negern mit Berücksichtigung der Grösse des Kindes und ihre Beziehung zur Kindslage und zum Geburtsverlauf bei beiden Rassen. T. C. Riggs (Baltimore).
55 Fall von Endometritis post abortum bei einem *11 jährigen* Mädchen (in girl of 11). Schütze (Königsberg).

52. **Myoma and Pregnancy.**—Stratz has become convinced that in by far the largest majority of cases, the myoma can be left until delivery. Myotomy during pregnancy is indicated only in the rarest cases.

Deutsche medizinische Wochenschrift.

56 (XXXI, No. 14, April 3.) *Early Diagnosis and Early Treatment of Tabes.—Bemerkungen zur Frühdiagnose und Frühbehandlung der Tabes dorsalis als einer "Aufbrauchkrankheit." Determann.
57 Simple Maneuver to Determine Position of Head in Small Pelvis.—Ein einfacher Handgriff zur Bestimmung des Tiefstandes des kindlichen Kopfes im kleinen Becken. W. Thomass.
58 *Ueber abdominelle Totalexstirpation des Uterus mit sagittaler Spaltung des Cervix-Stumpfes bei Cervix-Myom. K. Reinecke.
59 Bactericidal Action Not a Factor in Finsen Treatment.—Ueber die bakterizide Wirkung des Lichtes bei der Finsen-Behandlung. V. Klingmüller and L. Halberstaedter.
60 Changes in Walls in Suppurations in Bone Cavities.—Ueber Wandveränderungen bei Eiterungen in starrwandigen Knochenhöhlen. Gerber.
61 New Viewpoints in Bacteriology of Leprosy.—Neue Gesichtspunkte in der Leprafrage. Deycke Pasha and Reschad Bey. (Commenced in No. 13.)
62 *Prophylaxis of Infection from Communion Cup.—Uebertragung von Infektionskrankheiten bei der Abendmahlsfeier und Vorschlag zu einer Modifikation der Feier. A. Moeller.
63 Die neue sichere Epilations-Methode *Kromayers* und *die* Elektrolyse. W. Kuhn. Id. Kromayer.

56. **Early Diagnosis and Treatment of Tabes.**—Edinger recently advanced a theory that certain nervous affections are due to lack *of normal repair of the nerves after functional* use. His communications on the subject have been summarily reviewed in The Journal, the latest on page 994. Determann is convinced that this theory is extremely valuable as a basis *for the diagnosis of incipient tabes.* Treatment should aim to remove the underlying cause, generally a toxin. It should also aim to ward off not only all excessive functioning, but a large proportion of normal, ordinary functioning in order to prevent the spread of the process to the adjacent, still sound parts of the nerves. The third aim of treatment should be to regulate the nutrition of the affected nerves, and thus to bring them back to normal functioning in time. Determann has been treating tabes on these principles for some years, and has now a record of 130 cases in which the diagnosis was based on early symptoms before the classical syndrome developed. Edinger's theory supplies a scientific basis to his empiric success, which he recently described at length in a thesis (Freiburg), republished in the *Sammlung Abhandlungen a. d. Gebiete der Nerven- u. Geistes-Krankheiten*, 1904, Nos. 2 and 3. In 14 cases he was alone in thinking that the slight vague symptoms observed were the premonitory signs of tabes, but the course of the cases confirmed his diagnosis. He has treated 40 patients through several years by a combination of hygienic, physical, and dietetic measures and has had the satisfaction of keeping them in comparative health, and active members of the social or business world. As soon as the affection is suspected, the affected organ and all the parts of the body dependent on it are placed in conditions which will exclude as far as possible all functional demands on them. Nourishment must be supplied more abundantly to the affected cells. This is accomplished by a generous diet supplemented by measures to bring the nourishing fluids directly to the spot. This is done by application of stimuli to the periphery which attract the blood to the part and induce a series of reflex phenomena involving the innervation, the vasomotor processes, the distribution of the blood, and possibly also the metabolism and muscular activity. The entire habits of life should be regulated and everything avoided that tends to excess, physical overexertion, fatiguing journeys, the necessity for long standing, and irregularities of all kinds. "Catching cold" must be guarded against with extra care; the bladder should be emptied every hour or hour and a half, and very loud speaking should be avoided, as also all irritation of the gastrointestinal tract. Intercurrent diseases should be prevented and treated with exceptional care. Reclining in the open air is the best means of favorably influencing nervous affections if the circumstances are made to conform to make it an entertaining, agreeable and refreshing mode of passing the time with all disagreeables eliminated. This open air reclining seems to exert a specially favorable influence on the nitrogen metabolism, and thus directly aids the exhausted nerve cells. Several short graduated walks should be taken during the day, and hydrotherapy, carbonated baths, and other mild means of stimulation should be judiciously applied. Massage of the muscles, group by group, centripetally, will be found useful. The main point is to have the patient under supervision for two years at least, and to vary the measures and combinations to insure gentle exercise to fit the circumstances and case. Among his patients is an actor, still playing prominent rôles, who seven years ago presented symptoms

of incipient tabes and has been treated on the above principles. Four are merchants in a large city. They spare themselves all unnecessary functional demands on their nervous system, and occasionally return for a course of treatment. As examples of the early symptoms he mentions that the foot of an apparently healthy man began to swell after a long bicycle trip, and a typical tabetic arthropathy developed. Another robust man experienced difficulty in urinating and tendency to impotence after a long bicycle trip. Laryngeal crises were the first manifestations in an actor forced to strain his voice on the stage. A judge complained of difficulties in urinating and incontinence years before these symptoms were recognized as the heralds of tabes. The first symptom in another patient was a numbness in the feet after a cold footbath, and in another case, a feeling of heat in the feet after standing long in the snow. Headache, vertigo, congestion of the head, weakness of the eyes and tendency to photophobia were the first symptoms in a number of men mentally overworked.

58. **Improved Technic for Removing Myoma of the Cervix.**—The aim of Reinecke's communication is to show the great advantages offered by sagittal slitting of the stump of the cervix after removal of the body of the uterus in case of a myoma in the cervix. He describes a case in detail. There were a number of myomata, two on the cervix, and the uterus had contracted into hour-glass shape, and was held firmly in the pelvis. Owing to the impossibility of rendering the vagina aseptic on account of the presence of the myomata in the cervix, he did not wish to enter the vagina from the entrance, but easily enucleated the myomata after slitting the cervix through the abdominal incision. When the operation was concluded the posterior vaginal wall was incised for drainage, and the patient rapidly recovered.

62. **Individual Spoons to Dip in Communion Cup.**—Moeller is superintendent of the great Belzig sanatorium, and here relates bacteriologic tests of pieces of sterile cotton with which the edge of the communion cup was wiped after the communion service at the sanatorium (40 persons) and also in the city church (150 persons), also in a church in Berlin, where several hundreds had participated, and also in the city of Eupen. The wine left in the cup was also used for the tests. He mentions that scraps of bread were found in the wine. The results of the tests were positive in regard to tuberculosis in only one out of the six guinea-pigs inoculated, but many other pathogenic bacteria were cultivated. He suggests as a simple, cleanly and practical means of avoiding the transmission of infection from this source to have each communicant bring a spoon-shaped small dish with which he can dip up the wine for himself, or the clergyman can take a fresh spoon for each person from a pile on the tray. The sexton could collect and boil these spoons afterward, ready for the next service, or they could be made of paper and burnt. This would remove every hygienic objection without sacrificing the spirit of the sacrament, and even the poorest congregation can well afford the expense of these small spoons or scoops.

Deutsches Archiv f. klinische Medizin, Leipsic.

Last indexed page 1649.

64 (LXXXII, Nos. 5-6.) *Ueber letale Anämien im Greisenalter (after 60). O. Kurpjuweit.
65 *Phosphor-Vergiftung und Autolyse (phosphorus intoxication). Waldvogel.
66 *Blood Pressure. Vessel Tonus and Work of the Heart in Relation to Hydrotherapy.—Ueber Blutdruck, Gefässtonus und Herzarbeit bei Wasserbädern verschiedener Temperatur und bei kohlensäurehaltigen Soolbädern. J. Strasburger.
67 Paroxysmal Reduplication of Heart Rate.—Ueber anfallsweise auftretende Verdoppelung der Herzfrequenz. F. Lommel.
68 Zur Lehre von den Extra-Systolen. D. Gerhardt.
69 *Participation of Oxygen in Action of Fluorescent Substances.—Die Beteiligung des Sauerstoffs bei der Wirkung fluorescierender Stoffe. A. Jodlbauer and H. v. Tappeiner.
70 *Distribution of Blood Under Influence of Thermic Stimuli.—Ueber die Blutverteilung im menschlichen Körper unter dem Einfluss thermischer Reize. O. Müller.
71 Zur Frage des sogen. "Herzblocks" beim Menschen (condition due to stoppage of some of the auricular contractions at th [illegible] y). E. Finkelnburg.
72 Ueber [illegible] Sahli.
73 Ueber [illegible] hervorgerufenen Eosinophilie." C. J. Fauconnet.
74 Zur kolorimetrischen Eisenbestimmung im Blute (tests for iron). A. Jolles.
75 *The Reversed Tuberculin Test.—Versuch einer neuen Serum-Diagnose der Tuberkulose. A. Brion (Strasburg).
76 Behavior of Blood Pressure in Albuminuria of Puberty.—Verhalten des Blutdruckes bei der Pubertätsalbuminurie. M. Matthes.

64. **Primary Fatal Chronic Anemia After Sixty.**—Kurpjuweit describes in detail, with the postmortem findings, 2 cases of primary, chronic anemia in men of 62 and 68. In this type the anemia is moderate in degree and is accompanied by enlargement of the spleen, slight poikilocytosis of the red corpuscles and excessive leucopenia, as low as 660, without essential marrow elements. The affection progresses to a fatal termination in about six months, with variable moderate or high fever of a continuous or intermittent type. The signs of a hemorrhagic diathesis do not appear until late, and are not severe. The bone marrow becomes completely atrophied or shows signs of acute degeneration. The blood findings are not those of pernicious anemia, especially the leucopenia. The symptoms resembled those of what has been called "aplastic anemia," but he thinks that the findings in the bone marrow were of a different nature. His statements were discussed in an editorial in The Journal, on page 1534.

65. **Phosphorus Poisoning and Autolysis.**—Waldvogel relates experiments which suggest that the essence of phosphorus poisoning is in its inducing autolytic processes in the body.

66. **Behavior of Vascular System Under Hydrotherapy.**—Strasburger epitomizes the most important results from his extensive research in the statement that hot baths make considerable demands on the heart in every direction. Cool baths exercise the heart while at the same time they spare it. This is more pronounced—in a favorable sense—in carbonated saline baths than in any plain water baths. The carbonated saline baths exert their influence on the heart itself like a transient digitalis action. The latter, however, contracts the vessels, while the other expands them. It might be expressed thus: Carbonated saline baths exercise the heart under easier and more sparing conditions. The experiments in this research were all made on healthy subjects, and the conclusions apply to these only.

69. **Oxygen and Action of Fluorescent Substances.**—A long array of experiments is reported which throw light on the phenomena of fluorescence and on the action of fluorescent substances on bacteria, etc.

70. **Distribution of Blood in Body Under Influence of Thermic Stimuli.**—Müller announces that he has demonstrated that the vessels of the periphery react to thermic stimuli exactly contrary to the way in which the vessels of the interior react. Cold contracts and heat expands the peripheral vessels, while the reverse occurs in the visceral and intracranial vessels. He has devised a means to estimate these variations in the regional vascular apparatus by what he calls "partial weighings." Four ordinary household scales with dials are placed on a long narrow table, with the dials all facing the same way. The pan is unscrewed and a piece of wood, shaped something like a coat rest, is laid on top of the scales in place of the pan, the center pressing down on the scales, the ends projecting 6 cm. beyond the edge of the table on each side. A rope is tied to this crosspiece, fastening at each end and forming a swing, with a board seat, a few inches above the floor. There are thus four of these little swings in a row below the table, and the person to be tested lies down on them, one swing board under his neck and shoulders, one under his back, one under his hips and one under his legs below the knees. The arm is further supported on another scale standing on the floor. Experiments with persons lying on these scales, thus weighing the different parts of the body at the same time, showed interesting results when the legs were sprayed with carbonic acid or hot air or heat stimuli were otherwise applied. The results were strikingly harmonious on different subjects under like conditions. He also obtained interesting results from the plethysmograph applied to the crossed leg and arm with the stimuli applied to the crossed mates.

75. **Reversed Tuberculin Test.**—Brion had been studying the reaction that follows injection of human serum in a tuberculous guinea-pig when Merieux published a communication on the subject. (The Journal, page 726.) Brion's findings were less constant than those reported by Merieux. The reaction

did not occur with any regularity. Its presence or absence probably depends on the intensity of the infection in the animal. Hence, he does not believe that this reversed tuberculin test can be relied on for diagnosis.

Mitteilungen a. d. Grenzgebieten d. Med. u. Chir., Jena.

Last indexed page 1154.

77 (XIV, No. 4.) *Elimination of Iodin and Its Relation to the Thyroid Gland.—Ueber die Ausscheidung des Jods im menschlichen Harn und ihre Beziehung zum Jodgehalt und zur Verkleinerung der Strumen. A. Kocher (Berne).
78 Traumatic Rupture of Wall of Aorta.—Ueber traum. Aortenwandrupturen mit bes. Berücksichtigung des Mechanismus ihrer Entstehung. Revenstorf (Hamburg).
79 Chronic Suppuration in the Fingers with Deposits of Calcium Carbonate.—Chronische Eiterung an den Fingern mit Ablagerung von kohlensaurem Kalk. T. Dunin (Warsaw). Two cases.
80 Ueber congenitale Brust-Muskel-Defekte. W. Wendel. One case.
81 *Absorption in Intestines.—Experimentelle Beobachtungen über die Resorption im Dünn- und Dickdarm. B. Heile (Breslau).
82 Changes in Liver with Fat Tissue Necrosis, etc.—Ueber Leberveranderungen bei multipler abdomineller Fettgewebsnekrose und Pankreatitis haemorrhagica. J. Wiesel (Vienna). Four cases.
83 *Beiträge zur Symptomatologie der Carcinose des Rumpf-Skelettes. K. Petren (Upsala).

77. **Elimination of Iodin and Its Relation to the Thyroid Gland.**—Kocher has been making extensive investigations on this subject. His tests of persons with sound thyroid glands showed that the elimination in the urine of from .5 to 1 gm. of sodium iodid, ingested fasting, showed very little variation under like conditions. When the thyroid gland was diseased, however, there were wide variations in the proportions eliminated by various subjects and also by the same person at different times. Study of these variations demonstrated that they were due to differences in the histologic structure of the struma. The thyroid gland takes up the iodin and eliminates it rapidly again under normal conditions. The elimination is very much less rapid in thyroidectomized individuals. When the elimination proceeds rapidly in a case of struma, the gland will soon be found to have shrunk in size. Sometimes when the shrinking is very pronounced more iodin will be found in the urine than had been ingested. The specific parenchyma evidently becomes broken down in these cases. In certain others less iodin is eliminated than normally, and the struma does not shrink in size. This is the rule in the colloid goiter. The physiologic activity of the thyroid in this case is reduced. Further tests revealed that goiters which reacted to the iodid, with retrogression and increased elimination of iodin, undoubtedly took up an abnormal amount of iodin and worked it over in some abnormal manner, allowing it to get into the circulation and to induce symptoms of iodism or thyroidism. The practical conclusions are to the effect that iodid treatment should be commenced as early as possible in incipient goiter, with small doses every second day. If the struma is capable of recession, an unmistakable effect will soon become manifest, and small, periodical doses will suffice to keep it reduced to its smallest possible size. It is unnecessary to give large doses in these cases, as they expose to a needless danger of iodism; that is, of partially abnormal functioning of the gland. If a struma does not show signs of retrogression under these small doses, and if it is a diffuse or nodular colloid struma, a longer and more intensive iodin treatment should be instituted. There is no risk to the patient from such treatment, as the colloid takes up the iodin, and even large amounts are scarcely able to bring the proportion in the gland to the normal figure. On the other hand, even this iodin treatment is rarely successful.

81. **Absorption in Intestines.**—Heile's experiments were made on dogs with a fistula in the lowest part of the ileum, and on dogs and men after exclusion of the large intestine. A number of tables and curves of the findings are given which establish that the small intestine absorbs albumin as well as cane and grape sugar when the amounts correspond to the body's needs for nourishment. Amounts in excess of this are not absorbed, but are passed along into the large intestine, as is also the case when there are catarrhal conditions. Some of the digestion enzymes probably pass into the large intestine with the undigested food and aid in its digestion under favorable conditions. The large intestine is incapable of absorbing unaltered albumin (egg albumin or casein). The absorption of water and of grape and cane sugar is very slight in the large intestine, much less than in the small intestine. The large intestine, however, absorbs the alkali which arrives with the fecal masses. Heile warns that in cases with an artificial anus or in which part of the intestine has been excluded the deprivation of alkali from the loss of this absorbing function of the large intestine may entail serious disturbances in metabolism.

83. **Symptomatology of Carcinosis of the Trunk.**—Petren analyzes 4 personal cases and also the literature on the subject, formulating the conclusions that carcinosis of the skeleton of the trunk is liable to follow cancer of the breast or prostate even years after its removal. The pains may be paroxysmal, with long intervals of calm, or they may be connected with movements of the trunk, or there may be merely a difficulty in moving or inability to walk. As a rule, the symptoms are restricted to the bones; that is, there are no root nor spinal symptoms.

Nordiskt Mediciniskt Arkiv, Stockholm.

Last indexed page 1156.

84 (XXXVII, Surgery, No. 3.) Myopia in Colleges in Sweden.—Studien über die Myopie in den vollständigen höheren Lehranstalten für Knaben (högre allmänna läroverk) Schwedens. F. Ask.
85 *Zur Technik der Dickdarm-Resektion (of large intestine). J. Borelius.
86 Ueber die Angiotripsie in der allgemeinen operativen Chirurgie. E. S. Perman.
87 Frühzeitige Operation der akuten Appendicitis um septischer Peritonitis oder Allgemeininfektion vorzubeugen oder solche zu begrenzen (early intervention). F. Bauer.
88 Ueber die moderne Pankreas-Chirurgie. G. Naumann.
89 (Internal Medicine, No. 3.) Ueber die biologische Bedeutung der krankhaften Erscheinungen (biologic significance of morbid manifestations). A. Vestberg.
90 Lichtbehandlung im Krankenhause St. Goran, Stockholm (experiences with phototherapy). M. Moller.

85. **Technic of Resection of Large Intestine.**—Borelius reviews his 20 cases of resection of part of the large intestine. They fail to show any superiority of the extraperitoneal method over others, or any advantages from operating in several sittings. The thickness of the walls forbids the use of the Murphy button, as a rule. Infection and death occurred in one case after side-to-side union, and pus escaped through the vagina in another. A fistula developed in one case of end-to-end union, but closed spontaneously. All the other patients recovered without mishap. The suture was end-to-end in 12, end-to-side in 1, and side-to-side in 7. The 13 patients treated without any kind of drainage all recovered, as also the 3 cases drained. In the 4 cases in which tamponing was applied one patient succumbed soon to infection, and symptoms of acute dilatation of the stomach developed in another the day after the tampon was removed. The two others made a smooth recovery. An important point in the technic is the careful ligating of the vessels in the mesocolon. This must be done for each separately. In one of his cases the vessels were ligated in a bunch. This careless technic resulted in hemorrhage later and development of a hematoma, which threatened the patient's life and delayed recovery for several weeks. The details of all his cases are given in tabulated form. The article is in German.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

CONCEPTO SANITARO DE LAS ENFERMEDADES CUARENTENABLES, por el Dr. Federico Torralbas, ex-comisionado Medico de Cuba en México durante la Epidemia de Peste Bubonica, Medico del Departamento de Sanidad de la Habana, etc. Paper. Pp. 208. Habana, Cuba: Imp. De Gutierrez Y Comp. 1905.

NOTES ON X-LIGHT. By William Rollins. Cloth. Pp. nearly 600. Fully Illustrated. Published for the Author by the University Press. Cambridge, U. S. A.

ACUTE CONTAGIOUS DISEASES. By William M. Welch and Jay F. Schamberg, M.D. Illustrated with 109 Engravings and 61 Full-Page Plates. Cloth. Pp. 781. Price, $5.00. Philadelphia: Lea Bros. & Co. 1905.

EIGHTEENTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF THE STATE OF OHIO for the Year Ending Dec. 31, 1903. Cloth. Pp. 569. Springfield, Ohio: The Springfield Publishing Co. 1904.

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Original Articles

CHRONIC POISONING BY ACETANILID.*

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That chronic poisoning characterized by degenerative changes in the blood, and by physical disability, may result from the continued ingestion of anilin derivatives is well known, as it is also well recognized that acetanilid, one of these products, because of its small cost and its toxicity in excess of others of this group in common use, renders it particularly liable to be the offending agent. Acetanilid is the chief ingredient in headache powders so generally dispensed by pharmacists without prescription, as it is in certain secret nostrums both in use by the rank and file of the profession, and, unfortunately, thus introduced by them to the laity.

The toxicity of acetanilid in common with related coal-tar products of the antipyretic group, has long been known, and the serious, if not fatal, results which may follow its incautious use in fevers and debilitating conditions should have in past years been brought forcibly to the attention of the reckless seeker after a remedy to reduce temperature, or to assuage pain. But the knowledge of the toxic action of this group, and especially of acetanilid, has had little effect on the unscrupulous, who have found a ready market for compounds offered as analgesics. Attempts have been made to overcome the immediate ill effects of the drug by combining it with small quantities of caffein, and a very popular nostrum now—I should suppose pretty well known throughout the civilized world—contains these as chief ingredients, which also enter into the makeup of presumably nearly all headache powders.

I have under observation a man, aged 40. of splendid physical development, who recently consulted me concerning his digestion. Although of good habits, not given to alcohol and but moderately to tobacco; getting an abundance of fresh air and exercise, and having no element in his life unconducive to well-being. he has been unaccountably more or less out of sorts for the past year or two. There were loss of cardiac tone. a sallow, peculiar dusky hue of the skin. and anorexia. Examination of the stomach contents showed hyperchlorhydria, a condition not regarded as responsible for his partial invalidism. My laboratory associate. Dr. Ghriskey. like myself. was struck by the dusky hue of the skin, not to be attributed to respiratory or cardiac disability. Inquiry elicited the fact that for two or three years his habit had been to take headache powders; he had formed the habit of resorting to them at first for the relief of headache. and finally when at all out of sorts. He invariably had taken one on rising in the morning, and sometimes several (8 to 10) through the day, but often only 2 or 3. These were a proprietary preparation sold under the name of "headache powders,"[1] or a frank prescription, which he obtained without a writing, of acetanilid and caffein; or antikamnia, which he also had combined with acetanilid and salol. Lately he had taken very few; that morning three before his visit to me. The blood, as it stood on the ear, showed the characteristic chocolate hue indicating the presence of methemoglobin. Hemoglobin estimation was thus impossible. Inspection showed moderate variation in size and shape of erythrocytes. These were 3,860,000 per c.mm.; the leucocytes, 9,200. Differential count of 550 leucocytes (Dr. Ghriskey):

Polymorphonuclears	62.20	per cent.
Small lymphocytes	13.66	"
Large lymphocytes	23.81	"
Eosinophiles	0.33	"

Decided variation in size of lymphocytes, from very small to large. The greater number were of medium size. Of the large, 18 were in the transitional form. During the above enumeration there were noted 1 megaloblast and 1 normoblast. Blood placques were increased.

The blood examination was made five hours after the only meal of the day, a breakfast of the whites of two eggs, toast, and two cups of weak tea. There was, therefore, present a pathologic leucocytosis and a diminution in the erythrocytes, the cause of which, an acetanilid toxemia, was not hard to seek, other factors being excluded by careful inquiry. The urine showed nothing characteristic.

This case of mild acetanilid poisoning is mentioned in passing as an example of one of perhaps many similar in which a slight or greater degree of invalidism might be traced to the incautious formation of the acetanilid, phenacetin, or a similar habit.

I recall the case of a woman, aged about 38, under observation some years ago, who had curious attacks of cardiac debility, attended with dyspnea and on one occasion marked edema of the legs. A grave form of mitral disease had been diagnosed by her previous attendant. a therapeutist of eminence. I saw her often casually in attendance on a member of her family. In several examinations there was absolutely no indication of cardiac disease, valvular or otherwise, and no history of any ailment that could have been a factor in originating such. The patient was of more than ordinary robust build. the hue of the skin was habitually dusky. and the breath intensely, peculiarly fetid. I discovered that for a long time she had been a phenacetin habitué.

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* Read by title at the meeting of the Association of American Physicians, at Washington, 1905.

[1] One of these, a proprietary preparation largely advertised and sold in Philadelphia under the name of a certain doctor's headache powder, I found by analysis to consist solely of acetanilid, with a little coloring matter.

Alcohol, to which she had lately become addicted through it having been prescribed for the cardiac condition, I regarded as a factor in contributing to the *fœtor ex ore.*

While one can understand the tendency to enslavement possessed over its unfortunate victim by alcohol, by morphin, by cocain, and the like, it is difficult to comprehend the employment of these coal-tar analgesics to the extent that a distinct addiction to their use is established, and yet that such is the case there is no doubt, even when their use is acquired other than for the relief of pain.

Luce[2] reported two interesting instances of acetanilid addiction, in which the drug had been originally prescribed for pelvic pain.

The first of these, when seen by Dr. Luce, was hysterical and emaciated; there were recurring convulsions, edema of the inferior extremities, feeble and irregular heart, blueness of the mucous membranes, but pallor of the skin; albumin and casts in the urine. The initial diagnosis was uremia. Later, among the patient's belongings a large quantity of acetanilid was discovered. When the drug was withheld the patient "soon began to exhibit all the traits peculiar to the confirmed morphinomaniac, moral depravity, and the like." She employed every possible means to obtain the drug, attempting even to bribe the nurse and, this failing, the members of the family. Recovery followed under careful treatment, and in six months the patient was well, and had remained so to some months later, at the time of the report.

The second case was very similar. So secret was the habit that the attendant, with whom Dr. Luce saw the case, would not entertain the notion of a hidden drug habit. The use of acetanilid was accidentally discovered, and its withdrawal attended with similar difficulties, as in the other case.

In the interesting case of Stengel and White,[3] under their care in the University Hospital, which in character of blood changes that of mine to be reported closely resembles, concealment of the habit was in evidence, and although the patient's ill-physical and blood condition early aroused a suspicion on the part of Dr. Stengel of some form of hemolytic poisoning, it was only with the greatest difficulty ascertained. The case is briefly as follows:

Miss R., aged 25 years, had suffered from insomnia for five years, resulting from neuralgia, and had been given chloral and other drugs for its amelioration. There had been much gastric disturbance; excessive cyanosis for five years; skin of a leaden hue; emaciation; feeble pulse; rapid weak heart action; cardiac enlargement; systolic murmur heard over the whole precordia; venous hum and thrill in the neck; slight liver enlargement; spleen easily palpable; more or less edema of legs for several years; urine claret colored; specific gravity, 1024; albumin; no glucose; granular casts. Blood examination: erythrocytes, various counts, from 1,860,000 to 3,040,000; leucocytes, 19,800. No methemogoblin or hematoporphyrin discovered in blood or urine (Dr. Edsall).

Acetanilid addiction had been established through taking the drug for neuralgia. The habit was recent and unknown to former attendants. One had regarded the case as valvular disease; another as mediastinal tumor; others had thought the cardiac condition could not account for the cyanosis; while a prominent clinician had diagnosed a tear in the interventricular septum. Through the patient being detected in receiving a package of acetanilid capsules, she finally admitted having been taking the drug in large quantities for some five years, and had continued its secret use in the hospital. On its withdrawal improvement was progressively manifest, save for a few days, when a capsule containing phenacetin was administered—then cyanosis, which had quite disappeared, returned. The signs of cardiac disability soon entirely disappeared, and the patient was finally discharged "practically well in every respect."

I wish now to report a recently observed case of my own, of acetanilid addiction, in which the habit had been formed, not for the relief of pain, but through the drug having originally been prescribed for nervousness and insomnia. The point of special interest involved is the blood condition, the picture of which, if its chocolate hue evident in the earlier examination and the slight leucocytosis were disregarded, would appear that of pernicious anemia, characteristic of the blood condition observed by Stengel in his case (though in the case to be related present in less degree) and as usual in the blood studies made by Ehrlich and Lindenthal, Krönig, and others, in certain cases of poisoning by the aniline derivatives. The case is as follows:

A. F., male, aged 50 years, merchant, had been brought to Philadelphia from a distant part of the state to consult a kinsman, a physician, concerning his progressively increasing ill health, and was referred to me. He had begun to ail about two years before; became debilitated, and lost weight; segments of a tapeworm were discovered in July, and the entire worm was believed to have been voided in October. He continued, however, to decline in health. His stomach had been upset for a long time, anorexia was usual, and frequent vomiting common, on which account lately he had eaten very little, and chiefly liquid food. He felt required to take a small amount of whiskey daily and a very small quantity affected him. His usual weight was 140 lbs., but he had now declined to 116. I was summoned to see him at his hotel on March 13, 1905. He was abed; profoundly debilitated; was stuporous; and replied incoherently to questions. He had stood the journey to the city badly. The skin was of a dusky hue; the mucous membranes were pallid and anemic looking; heart feeble, but free from enlargement or adventitious sounds. Outline of liver dullness slightly increased; spleen not palpable; right kidney loose and easily grasped; inferior border of stomach on the line with the umbilicus.

On the following day he was brought to my office for further examination. His appearance was that of a profoundly ill man. He was apathetic; there was marked mental hepatude, as was noticed the previous night, and so debilitated was he that he could scarcely speak. The heart sounds were much enfeebled, and the pulse at the wrist barely perceptible. There had been a good deal of pain in the thighs and legs, with paresthetic sensations in the extremities; edema was not present; the knee jerks were absent, and only a slight flicker evident to reinforcement; the pupils reacted to light and accommodation; station impaired, but evidently due to debility and not to loss of co-ordination; no tactile loss. Blood which exuded from puncture for examination was of a deep chocolate color; inspection showed poikilocytosis and variation in size of corpuscles. The urine was of unusually high color, resembling that of Madeira wine or porter, and had a peculiarly fetid, aromatic odor. Interrogation of his wife and himself, elicited the information that for two or more years he had acquired the habit of taking antikamnia, which had been originally prescribed by his attendant for the relief of insomnia and nervousness; that for several years, at least two, he had taken daily some twelve tablets of either plain antikamnia, or of antikamnia with codein, and this custom he maintained to the present, totally unaware of its effect in producing the present condition, which was regarded as the result of the gastric disorder. He had, besides, about a year ago, taken for a while 2 ozs. of somnos at night. This he had not used for a long time. The antikamnia preparation was his mainstay, and the only drug now used. His physician, he said, had discovered glucose in the urine, a year or so before, although the twenty-four hour quantity never exceeded two pints. He himself had noticed the peculiar color and odor of the urine for a long time, and it was so evident when "diabetes" was diagnosed.

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[2] American Medicine, Sept. 26, 1903.

[3] University of Pennsylvania Med. Bull., February, 1903.

March 14:—Urine clear, though very dark brown color; odor peculiarly aromatic, and resembling somewhat that of burnt caramel; acid, sp. gr. 1026; albumin, marked reaction; glucose absent though Fehling's test reduced; bile pigment absent (ether and iodin test). Microscopic examination (centrifuged specimen): few granular and hyaline casts; cylindroids; scattered red blood corpuscles, and leucocytes. It was noted that a specimen should be examined for methemogoblin and hematoporphyrin.

Blood examination, March 14: Chocolate color. Hemogoblin estimation then impossible. Three days later the blood was of normal hue, then hemoglobin, 60. Erythrocytes 2,522,524; leucocytes 9,700. Inspection shows variation in size and shape of erythrocytes. In less than a half-hour's examination (Dr. Ghriskey) of a stained smear, there were seven normoblasts and one megaloblast seen.

Further blood report by Dr. Ghriskey: "Variation in size and shape of erythrocytes; moderate polychromatophilia; stray erythrocytes showing granular degeneration; blood placques notably present; nucleated red corpuscles; normoblasts 407 per c.mm.; megaloblasts 58.2 per c.mm. Differential count of 500 leucocytes: Polymorphonuclear 65 per cent; small lymphocytes 25.6 per cent.; large lymphocytes 9.8 per cent; eosinophiles .06 per cent. During the above count, there were observed 21 normoblasts and 3 megaloblasts. The nuclei of these cells were generally round in shape; only several showed a tendency to segmentation."

March 15, examination of stomach contents: Fasting, took meal of bread and tea at 9:30 a. m.; at 11 a. m. lavage showed but little remaining; at 11:45 a. m. 60 grams stale bread; 250 c.c. weak tea; 30 c.c. removed at 12:55 p. m.; the color and odor of removed contents somewhat that of urine. Total acidity=23; HCl absent to Günzberg.

The antikamnia and the small quantity of whiskey he had been taking were ordered absolutely discontinued, and he was placed in the care of a competent nurse. Daily morning lavage was ordered, and menthol valerianate was prescribed for the control of nausea and vomiting. He was fed every three hours by day and given an abundance of pure water.

On March 17 the blood which exuded from the puncture for examination was normal in color.

Examination of stomach contents March 17: At 9 a. m., ate one roll; one soft boiled egg; cup of tea. At 11:20 a. m., 40 c.c. was easily removed; fairly normal appearing contents, well but unevenly solved; considerable ropy mucus; filtrate light amber; t. a. 64; Günzberg, strong; Toepfer, 45. Good digestion with normal HCl was therefore present.

Urine, March 17: 550 c.c. in twenty four hours; color and odor as previously described; acid, sp. gr. 1022; bile absent; albumin, well marked reaction. Microscopic examination: hyaline casts; cylindroids; scattered red blood corpuscles; and leucocytes. Specimen sent to a chemist for examination as to presence of abnormal constituents, the result of blood disintegration. Under a few days' rest abed; careful feeding; daily lavage; a bitter acid mixture before meals; iron albuminate, strychnia, and digitalin, there was a rapid improvement, and on March 25, eleven days after he came under observation, there was a marked change for the better, and he insisted on returning to his home to direct his business. The heart sounds were now fairly strong; the dusky hue of the skin had much lessened; and the pains in the legs and thighs had disappeared; the knee jerks were slightly evident without reinforcement. He was much stronger. Nausea and vomiting had disappeared; he had a good appetite, and for several days had been able to eat three full meals, with light food between. The urine had become normal in amount, and the peculiar odor had disappeared. March 23 it was 1450 c.c. in twenty-four hours. The characteristic odor was slightly present in this mixed specimen, but not in a single specimen voided two days before.

April 12, eighteen days after his return, in response to an inquiry as to his condition, he replied that he steadily continued to improve, weighed 124 pounds, ate well; was "gaining strength daily," although he slept badly and was nervous at night; and that the hue of the skin was more natural. He was still taking the tonics prescribed, including arsenic, and had not resumed the antikamnia.

It is regretted that the record in this case is not complete in that a spectroscopic examination of the blood was not made, as was contemplated, and that no report is at hand as to the presence of methemoglobin and hematoporphyrin in the urine and the character of the body causing the peculiar odor. These examinations were noted to be made, but the case was seen in the midst of active private practice, and the blood clearing so quickly left no time then to arrange for a spectroscopic examination. The chemist to whom the urine was sent for this examination neglected to undertake it. That methemoglobin was present in the blood, the appearance of the latter at the first examination strongly suggests, and that bodies characteristic of blood disintegration existed in the urine is quite likely. Non-isolation of these is regrettable.

In these cases of severe chronic poisoning by acetanilid[4] and related coal-tar products, the symptoms are usually very similar as concerns progressive mental and physical debility, which later often reaches a high grade. There are cardiac weaknesses, more or less pronounced cyanosis, and characteristic changes in the blood indicative of the pernicious action of a hemolytic agent. Apart from the usual chocolate hue of the blood so noticeable on puncture, the blood picture, were it not for an almost invariably present leucocytosis, would suggest pernicious anemia. There is a diminution in the erythrocytes, with variation in their size and shape, the presence of erythroblasts often in larger number than is encountered in pernicious anemia, polychromatophilic cells, and of cells the protoplasm of which is undergoing granular degeneration. The blood plaques are usually notably increased. A leucocytosis is common, the increase being, it is reported, usually in the polymorphonuclear elements. There were, however, in my two cases, which were uncomplicated, 37 and 35 per cent., respectively, of lymphocytes. In several cases reported the leucocyte increase may have been influenced by a coincident ailment adding its quota, and this also influencing the relative polymorphonuclear increase. Thus in Stengel's case there was an alveolar abscess, and in that of Hall,[5] bleeding hemorrhoids and rectal fistule; and in Cabot's case, nasal carcinoma. Curiously, in Cabot's case,[6] in which the blood as it stood on the ear presented the characteristic chocolate hue, and in which, therefore, the hemoglobin was not estimable, there was a polycythemia—the count ran over 6,000,000 on one occasion, and the only noticeable abnormalities in the stained specimen were slight poikilocytosis, granular stipping of many of the red cells, and undue fragility of the leucocytes. Erythroblasts were not in evidence. Methemoglobin was easily demonstrable in both blood and urine. The patient's general condition was good despite the evident cyanosis. Such a case might superficially suggest the condition which lately has attracted considerable attention—chronic cyanosis with polycythemia and enlargement of the spleen. Hall, in reporting his case of acetanilid poisoning, called attention to the likelihood of the initial confusion, and laid stress on the presence of characteristic anemia, etc.

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[4] It should be here remarked that the composition of antikamnia, the compound of acetanilid used in this case and that employed in many others in which "headache powder" is the form ingested, is, as is well known, a mixture of acetanilid, citrated caffein and sodium bicarbonate. Various analyses of antikamnia show it to contain approximately 70 per cent. of acetanilid.

1633 Spruce Street.

NEURASTHENIA CURED BY EXERCISE AND FORCED FEEDING.

REPORT OF TWO CASES.

EDWARD LIVINGSTON HUNT, M.D.
NEW YORK CITY.

In the two cases of neurasthenia reported in this article, one patient was treated in a hotel, the other in his own home in New York. They were both treated by the simple method of exercise and forced feeding. These methods were employed at a time when rest-cures, with restricted diet and isolation and sanitaria, were universally employed.

In the first case, all hope of recovery had been abandoned, and in the second, the court had signed the commitment papers. Both patients completely recovered.

Case 1.—A. B., aged 45, married, father of two healthy children, engaged in business.

History.—As a child he was well, except for the ordinary diseases of infancy; as a boy and youth he was strong, healthy, and in every respect normal. There was no history or indication of any serious or prolonged illness. His father was living and his heredity was good. There was no history of alcohol, tuberculosis or syphilis. During the last year he had been working unusually hard, and had assumed large responsibilities.

Present Illness.—This began about six months previous (October, 1901), at which time he began to be nervous, irritable and depressed. Three months later he was worse, and at the end of two more he had become restless, sleepless and even more depressed. During the last month he developed delusions, became violent, and had to be watched by two attendants.

Examination.—I first saw him April 5, 1902. At that time he presented the general appearance of one suffering from an acute mental disorder of considerable violence. He paced the room, rarely if ever sitting down. His hands were constantly employed. The eyes were wild and restless.

The physical examination was as follows: The man was of slight build, and poorly nourished. The skin was dry and sallow, and the mucous membranes were anemic. The pupils responded to both light and accommodation, but more rapidly and with a greater degree of dilatation than in the normal person. There was a marked tremor about the muscles of the face and tongue. The tongue was dry and coated. The viscera were negative. There was a tremor of the hands. The reflexes were all exaggerated. The voice was normal, as was the speech. The mental condition was one of great depression, distrust and hopelessness. At that time, no delusions were evident. He could not read, he could not play games, and he could not sit down for five minutes at a time. Every ten minutes he was obliged to pass urine, which was pale and of a low specific gravity, without albumin or casts. He ate fairly well. The treatment which he had hitherto been subjected to had largely been of an expectant nature, for he had been confined to the house by the aid of keepers and drugs.

Treatment.—I employed two strong and competent nurses, and at once put the patient on a food and exercise régime, which I shall now describe. The diagnosis, of course, was one of acute neurasthenia.

The day began at seven, when the patient was given a cold plunge, followed by a glass of milk. An hour later he was given a substantial breakfast, consisting of cereal, meat, eggs and milk, of all of which the patient was encouraged to eat heartily. Immediately after this the nurse took him out for a long, brisk walk, of about five miles. The route lay through the resident district toward the suburbs. At 11:30 he returned for a glass of milk with an egg; the next hour was given up to complete rest and relaxation. At 12:30 the nurse tried to interest him in reading or cards, and promptly at 1 a hearty dinner was served. An hour was spent at the table, as there was soup, a roast, several vegetables, dessert, and sometimes more. Neither tea nor coffee was served, only milk and water. At 2, the patient started out to spend two and a half hours away from home exercising. If the weather was mild, he and the nurse played golf, tennis or croquet; if stormy, they bowled or played ping pong. Billiards and pool were suggested, but owing to the difficulty of getting a suitable place, were abandoned. Sometimes they walked. At 5, another glass of milk with an egg was taken. Then the physician called and the patient reported his condition, relating in his own language and in his own way the events of the preceding twenty-four hours. For the next half hour he rested. Promptly at 6, nurse and patient spent twenty minutes in hard indoor exercise, such as punching the bag or playing at handball. A cold shower bath followed, and at seven came a substantial supper, with meat and eggs.

The evenings were devoted to games and conversation. At ten, Indian clubs and dumbbells were brought out, and at half-past ten the patient had a glass of milk and retired.

Course of the Disease.—The régime of forced feeding and exercise was kept up with great persistency and regularity for three weeks. At the beginning, the patient was so very restless that small doses of bromid were administered every three or four hours, and a tonic consisting of iron and strychnia was given after meals. Before meals, one of the glycerophosphates was given in hot water.

At the end of the first week there was manifest an improvement. All the symptoms were less aggravated and the appetite had increased. At the end of the second week, the restlessness had diminished. From then on, the improvement was steady, rapid, and consistent. The patient began to read the papers, and slept for two or three hours at night. In thirty days he was much better, and began to complain of the monotony of the régime. Ten days after this he was sent to a ball game and a matinee. These diversions broke the monotony of the treatment. At the end of the second month one nurse was dismissed and the patient began to admit that he was better. From this time on, the exercise was not quite so violent nor so extensive; the forced feeding continued. The patient was steadily gaining in weight. At the end of three months he began to go about alone, desired to see his friends, and attended church. He was still obliged to continue taking a very great deal of exercise, but was allowed to select what he preferred. The appetite was large, and the three meals were not satisfying. In addition, he continued milk and eggs. Throughout the five months he had a nurse, and all that time he was made to eat enormously and to exercise in every possible way, and for several hours each day. At the end of that time the one nurse was discharged. Just seven months after I saw him, the patient resumed his business and was discharged cured.

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[5] Boston Med. and Surg. Journal, December, 1903.
[6] Phila. Medical Journal, Nov. 29, 1902.

The second case is as follows:

CASE 2.—C. D., aged 55, spinster. Had always been well and healthy, but had always regarded herself as an invalid.

History.—She never walked, never ate very much, and never took much of an interest in anything. She contracted this mode of living, withdrew gradually from everything, and narrowed all her interests. She became depressed, morose, and "hipped" about herself. Her strength failed, her weight dropped to 97 pounds, and she was in a pitiable condition. It was necessary to have constantly with her two nurses. The pulse became very rapid and the condition of neurasthenia was fast drifting into one of melancholia. Sanitaria were tried without any avail.

Treatment.—I saw her first in midwinter, and after in vain trying sedatives, companionship, etc., I resolved to put her on the food and exercise cure. Two strong-minded nurses were provided, and she began with three slight meals, and three glasses of milk daily. The first day she walked only two blocks. Each day the distance was doubled, and when she had walked a mile the next day she was made to walk two. The feeding was as rapidly increased, so that she took three large meals, a light luncheon, quart of milk and three raw eggs daily. She began to gain weight very rapidly, to become quieter and to sleep. The exercise was then increased, until at its maximum she walked five miles daily. The feeding was almost beyond comprehension, as she took two quarts of milk daily, six raw eggs, and three big meals. She gained twenty pounds and gradually began to take an interest in her surroundings. Her entire time was now spent in eating, walking and resting. Each demanded the other. A cycle had been established, she continued to improve, and by summer was able to go away with only one attendant. The forced feeding was diminished, but the exercise was increased.

Subsequent History.—Nine months after I first saw her she was completely recovered, and is to-day a living example of the value of food and exercise in the treatment of neurasthenia.

71 East Fifty-Second Street.

Diabetes in Railroad Employes.—Navarre of Lyons, France, has been investigating the proportions of diabetics among the employes of the railroad line to the Mediterranean. The *Semaine Médicale* for April 19 summaries his report as follows: The entire number of cases of diabetes reported by the medical officers of the road during the last ten years has been 222, an average of 3 per 1,000. The proportion is much higher among engineers and conductors than among other employes, being 12.63 per cent. per 1,000 among the former and 13.1 per 1,000 among the latter, while it is only 1.76 per cent. among the office employes. During the last four years 723 employes have been retired on account of chronic illness, including 14 on account of diabetes. Of this number 11 were engineers or stokers, while only 3 were from the office force. Navarre comments that these figures suggest that vibrations and jars evidently favor the development of diabetes.

THE DANGERS OF THE DOMESTIC USE OF ILLUMINATING GAS AND THE MEANS OF AVOIDING THEM.*

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PHILADELPHIA.

The employment of illuminating gas manufactured from coal is about a century old. The original method, exclusively in vogue for many years, was by destructive distillation of soft coal. The operation is simple: The coal is heated strongly in a closed vessel, and the gases produced are cooled, purified and distributed. The impurities of the crude gas are numerous, but of only few types. Ammonium compounds and sulphur compounds are the most objectionable, and much attention has been given to devising methods for their removal, which in well-operated works is satisfactorily accomplished. The purified gas as conducted into the storage tanks consists principally of hydrogen and hydrocarbons, among the latter being methane, ethene and benzene. Some carbon monoxid is also present.

Laboratory experiment and clinical experience have shown that gas made in this manner has not very high toxic qualities. The hydrocarbons and hydrogen are rather negative than positive. They are incapable of supporting life, but are not active poisons. The gas always has a characteristic odor that gives warning..

During the past quarter of a century another method of making illuminating gas has been developed, and on account of its simplicity and comparative economy it has largely replaced the older method. This, so-called "water-gas," is made by forcing steam on hot coal, anthracite or coke. The action is not distillation, but partial combustion; the steam oxidizes the coal to carbon monoxid, and is itself reduced to hydrogen. These are combustible gases, almost inodorous and producing an almost non-luminous flame. In this form the gas is suitable for heating purposes. It is sometimes termed "fuel water-gas." To fit this gas for illuminating uses, it is enriched, that is, impregnated with hydrocarbons from petroleum, coal-tar or common oils.

A striking characteristic of water-gas is its toxic power, due to the large amount of carbon monoxid. As this is without odor or irritant action on animal membranes, it may be breathed for a long while unconsciously. It possesses a degree of free affinity, which causes it to combine with hemoglobin to form a body (carbon monoxid-hemoglobin) that is not susceptible of decomposition by free oxygen. Artificial respiration does not remedy this chemical asphyxia. Indeed, up to the present time, no satisfactory method of combating this condition has been devised.

In matters of this kind the economic features are almost always the controlling ones. In spite of the progress of sanitary science, the general management of municipal affairs and of households is along unsanitary lines. It is known, for instance, that unfiltered surface water is unfit for drinking purposes, yet it is the common source of public supplies. So, in the matter of illuminating gas, the more highly toxic water-gas has replaced the older form; the greater danger has been ignored in consequence of economy in cost. The protests made against its use years ago have been disregarded, and the result has been a steady increase in the number of deaths from gas poisoning. Fifty years ago such cases were rare; to-day they are common. Indeed, so far as Philadelphia is concerned, it is noted that illuminating gas and carbolic acid have replaced, for suicidal and accidental poisonings, the arsenic and laudanum of the civil-war period.

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* Read before the North Branch of the Philadelphia County Medical Society, 1905.

The cheapening of the gas supply, representing a reduction to nearly one-half the cost of old-fashioned coal-gas, has led to its extensive use for heating purposes, more especially for cooking. Most of the apparatus furnished for these uses is constructed with but little regard to sanitary requirements. So far as the heating apparatus is concerned, it is used in about the same manner as our barbarian ancestors used their tent fires, except that the ventilating opening in the apex of the tent does not find any analogue in our own rooms.

The gas stove, for cooking, does not represent so serious a menace to health as does the simple heating apparatus. The former is generally employed in the warmer season, when there is much natural ventilation; the most serious difficulty with it is the striking back of the flame, which causes imperfect combustion, with the formation of offensive and poisonous compounds. These burners are generally constructed on the Bunsen principle, but are not provided with a collar by which the air current can be controlled to adapt it to the gas current. Slight changes of pressure will cause interruption of the combustion, with the result that the flame passes back to the inner jet.

For the heating of bedrooms and bathrooms, now becoming a common practice in cities, apparatus has been designed which, though called "stoves," are merely batteries of burners. They appear to be rather wasteful, since there is little metal to be heated and therefore little radiating mass. They are connected usually by a cheap grade of tubing, that soon becomes brittle and leaky. A special, highly objectionable feature is a stopcock attached to the stove, so that the gas supply can be turned off at that point and the connecting tube still remain open to the flow of gas; if this tube leaks, gas continues to flow out into the room. In this way many accidents to life and to property are caused. The convenience of this lower valve leads to its frequent use. During the past winter I have had considerable experience with these appliances and I have found them more than once leaking so badly that a flame an inch long could be obtained from points in the connecting tube.

The modern water-gas is of such insidious nature that a sleeper can easily absorb a fatal quantity without being aroused. Let us suppose that the condition of the atmosphere is such that at each inspiration 1/1000 of a grain of the carbon monoxid present is absorbed. After the first inspiration, the blood will contain this quantity and the equivalent quantity of hemoglobin will be thrown out of function. At the next inspiration, another 1/1000 of a grain will pass in, but the first portion will remain, so that now 1/500 will be present. At the next inspiration the quantity will be increased to nearly 1/333, and so on.

Hüfner states that 1 gram of hemoglobin will take up 1.3 c.c. of carbon monoxid. Da Costa gives the average of hemoglobin in normal blood as 14 grams to 100 c.c., therefore 18.2 c.c., say 20 c.c., of carbon monoxid would render the hemoglobin of 100 c.c of blood useless; 20 c.c. of carbon monoxid weighs about 4/10 of a grain. From this rough calculation it is easily seen that even a small percentage of carbon monoxid can produce serious poisoning.

It is not appropriate to present the analytical data in detail, but the following table shows the principal ingredients of water-gas and coal-gas and their ordinary percentage by volume. It is taken from a recent edition of Kent's "Engineer's Pocketbook," and is presumably from authentic sources. Natural gas is inserted for comparison:

	Natural Gas.	Coal Gas.	Water Gas.
Carbon monoxid	0.5	6.0	45.0
Hydrogen	2.2	46.0	45.0
Methane	92.6	40.0	0.2
Ethene	0.3	4.0	....
Nitrogen	3.6	1.5	2.0
Carbon dioxid	0.3	0.5	4.0
Heat units per cubic foot	1,000	735	322

It will be seen that unenriched water-gas is principally hydrogen and carbon monoxid, and that its fuel value is rather low. When the gas is enriched, the so-called heavy hydrocarbons, compounds rich in carbon, are much increased, and the fuel value, as well as the illuminating power, is much improved. The following are partial statements of composition of enriched water-gas, such as is commonly supplied in American cities. The figures, except for heating power, are per cent. by volume. Not all the ingredients are given:

	No. 1.	No. 2.
Carbon monoxid	28.0	23.0
Hydrogen	37.0	36.0
Methane	19.0	21.0
Ethene	11.0	13.0
Heat units per cubic foot	650	658

As a comparison of heating power between the two types of gas, the figures given by E. G. Love for 1892 (Kent's handbook), may be quoted: New York City gas (carburetted water-gas), costing $1.25 per 1,000, yielded 715,000 heat units per 1,000 cubic feet. London gas (presumably all coal-gas), at from 60 to 70 cents per 1,000, yielded 668,000 heat units per 1,000 cubic feet.

It would be a great mistake, however, to assume that because of these objections we should abandon the use of gas, or even go back to original coal-gas. The object of this paper is to call attention to the dangers in order that renewed attention may be given to avoiding them. Gas is only dangerous when we lose sight of its composition and effects. Its advantages in the household are great. Properly used, it makes for sanitation instead of against it. At the cooking range, it simplifies very much the details of food preparation, relieves the housekeeper of much hard labor, and saves time, temper and trouble. The facility with which it may be used to obtain hot water at short notice is a great advantage, both to the well and to the sick.

The need in regard to house use of gas is better apparatus and better connection of that apparatus with pipes. Gas producers and sanitary authorities should join hands in enforcing regulations in these respects.

Let me take some of these reforms up in more detail. I suggest that the sale of inferior tubing be forbidden. Excellent rubber tubing can be obtained for a reasonable price. Taking into consideration my own experience this winter, I should say that the higher priced tubing is the more economical for it outlasts by a long while the inferior grades. The inferior grade often leaks when purchased. It is sometimes but little else than an imitation of rubber, its quality being concealed by a brilliantly colored covering. I have seen this tubing become in a short time so brittle that it could be broken like a dry twig.

Gas stoves for heating rooms should not have stopcock connections at the base unless attached by metal tubes with tight joints to the house mains. If attached by rubber tubes, there is great danger of the gas being only turned off below. This method of turning out the stove is the usual one with women and children, who can not conveniently reach the higher burner. The apparatus, however, should be so constructed as to prevent the rubber tube, even when of the best quality, remaining in free connection with the house main when the gas is not lighted.

Improvements should be made in the room stoves by which a larger radiator effect could be obtained by a given gas consumption. So far as I have been able to judge, the principal heating effect is the distribution of the products of combustion through the room. This, of course, is insanitary and doubly so because the shortness of heat forbids the free opening of windows. I believe that stoves for heating purposes should be placed only where the products of combustion can escape freely to the chimney. It must be borne in mind that the carbon monoxid poisoning is not the only danger in the use of gas. The products of normal combustion are more or less toxic and the products of imperfect combustion are still worse.

All burners on the Bunsen principle should be provided with collars for controlling the air supply, and the dealers in these articles should be expected to instruct purchasers in the use of the collar. The escape of the partially burned hydrocarbons resulting from the striking back of burners is very detrimental to health.

The use of illuminating mantles with gas has become very common of late years, and is a great advantage in several ways. The mantle, however, may interfere with proper combustion. It is not at all uncommon to notice a disagreeable odor proceeding from these burners, and this is usually due to displaced or worn-out mantles. The rubber tube connecting the ordinary drop-light with the house main is apt to be a source of danger for the same reason as noted in connection with the stove; the gas may be turned off for convenience, at the base of the light, instead of at the original attachment, and thus may leak into the rooms.

These points may seem trifling, but practical experience has shown that the dangers exist. A rational co-operation of the makers of gas and gas stoves on the one hand, with physicians and sanitarians on the other, will greatly improve the condition of the air of our living rooms.

The mortality statistics of Philadelphia and New York show strikingly the increase in the poisonous qualities of illuminating gas since the extensive introduction of water gas. Both cities have been extensive users of gas for over 50 years. A report presented in 1854 by the trustees of the Philadelphia Gas Works to City Councils states that during the preceding year 250,000,000 cubic feet of gas had been manufactured. This was, of course, for the old city alone, as the consolidation act was not approved until February, 1854.

Deaths from poisoning by illuminating gas do not occupy a place in the mortality reports of Philadelphia or New York until about twenty years ago.

For New York, I have the figures given by Dr. Witthaus in Witthaus & Becker's "Medical Jurisprudence and Toxicology," and the report of the New York Board of Health for 1902. The figures given by Dr. Witthaus are in summary as follows:

DEATHS IN NEW YORK CITY ATTRIBUTABLE TO POISONING BY ILLUMINATING GAS.

	Accidental.	Suicidal.
From 1867 to 1880, 14 years........	13	3
From 1880 to 1892, 13 years........	157	45

Up to 1887 the entries are very few; for the last four years of the second period above given the data are:

	Accidental.	Suicidal.
1889	33	11
1890	36	4
1891	35	19
1892	53	11

The report for 1902 gives:

Suicide by "asphyxia" (hanging and strangulation excluded)	118
Deaths by inhalation of "noxious gases" (not suicidal)	235

As a cause of death, illuminating gas first appears prominently in the Philadelphia reports for 1899, but the board's reports for 1897 and 1898 do not give detailed statements and the sudden appearance of this factor may be apparent only. The data are also somewhat confused by the introduction of an item, "suffocation," without further specification. I have endeavored to secure a little more significance to this by showing the proportion of deaths under 1 year and over 15 years attributed to it. I suspect that a notable proportion of suffocations in adults is due to gas poisoning.

The Philadelphia classification differs considerably under different administrations, and some of the terms used are confusing. It is evident that, although suicide is an important factor in mortality statistics, it is not a cause of death in the sense that pneumonia or yellow fever are.

ABSTRACT OF PHILADELPHIA MORTALITY REPORTS.

Year.	Suffocation—Special Cause Not Given.			Suffocation by Illuminating Gas.		Suicide by Illuminating Gas.
	Total.	Under 1 year.	From 20 to 80 years.	Total.	Under 15 years.	Total.
1893	No entry.	....	....	No entry.	....	No entry.
1894	1	....	1	....	....	1
1895	1	1	....	....	....	
1896	No entry.	....	....	No entry.	....	No entry.
1897	....	....	No detailed statistics.	....	....	
1898	....	....	....	....	....	
1899	27	22	5	16	1	30
1900	23	12	9	5	1	19
1901	62	25	31	1	0	26
1902	42	18	16	7	0	36
1903	50	21	21	29	2	45

MEDICAL EDUCATION.

WITH SPECIAL REFERENCE TO THE SUBJECT OF PHYSIOLOGY.*

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WASHINGTON, D. C.

I realize that this subject is not one calculated to arouse very enthusiastic interest among general practitioners; nevertheless, I am firmly convinced that, until the general profession takes a more abiding and discriminating interest in the subject of medical education, American medicine will hold itself open to such criticism, whether just or unjust, as has recently emanated from a lofty source.

In an address on this subject, delivered in 1870, Professor Huxley referred to the "singular unreality" of the knowledge of physiology possessed by candidates who appeared before him. "The knowledge I have looked for," he adds, "was a real, precise, thorough, and practical knowledge of fundamentals; whereas, that which the best of the candidates, in a large proportion of cases, have had to give me was a large, extensive, and inaccurate knowledge of superstructure."

It is my purpose to show, by a few quotations, that much the same state of affairs persists to-day; and now, as then, as it seems to me, we are forced to the same conclusion, that the "fault must be laid, more or less, to the prevalent system of medical education." I am neither so blind nor so pessimistic as to believe that the past thirty-five years have brought no progress; but, surely, the examples to be cited show that there is still great need of improvement, and I beg to submit that this need of improvement may be demonstrated all along the line, in medical students, medical teachers, medical authors, medical schools and state medical examiners.

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* Read before the Medical Society of the District of Columbia, 1905.

To begin with the medical student, I quote from a paper which shows that, while the writer has crammed a few facts, he has an utterly inadequate comprehension of their meaning and corelations.

> By reflex action we mean the power of the muscle to respond to any stimulus causing a contraction of that muscle. We have tendon reflexes, as the knee jerk, when any quick, sharp blow is rendered on the knee just over the patella. This reflex action is caused by stimulation of the terminal filaments of the nerve supplied to the various parts, and the impulse is conveyed to the brain center, causing contraction of the muscle. In the case of diseased muscle it will not respond to this stimulus, and we have no reflex action. The reflex action is divided into two groups: first, those acting superficially as on the skin itself, and second, those acting on the deeper layers.
>
> The arteries take the blood from the heart, and from there the blood goes on by way of the smaller arteries to the veins, *from veins to venules, to capillaries, and so on.* Of course, the flow depends on various conditions which are not asked, but I have given the general course.

Nor is this density confined to the subject of physiology; from the same hand we learn:

> An element is composed of the essential part of a substance or compound, or one of the parts. Atom is the smallest part of a compound known from a chemical standpoint. Molecule is a group of atoms held together by a substance, considered in relation to an element. Chemical compound, any compound which is held together by atoms and molecules that act chemically and are composed of compounds. Proximate principle is any organic or inorganic substance acting in a general way.

I give next a few quotations from medical authors and teachers, all published within the past three years. While I must confess that the first is hardly fair, I can not resist the temptation to share the joy I had in reading a book which came to me with a note stating that three prominent schools of a neighboring city "are ordering the work regularly." I have no doubt that this is the fact, the work is positively grotesque, but I fancy it is scarcely used as the author would wish to imply.

> Dialysis is a theory advanced, concerning which, we believe, the lymph and blood each interchanging their contents, the blood gives through this lining membrane nutriment and the lymph baths [sic!] the tissues with it; then the lymph, in return, gives its waste products (given up by the tissues) to the blood. *Osmosis* is the same theory. However, most physiologists think these changes are brought about by the vital act of the cells themselves. This process of interchange between the lymph and blood takes place through the capillary walls, which are semi-fluid cells with a high function. The blood gives more than it receives from the lymph.

This is, as I have confessed, a huge joke, though it was not so intended by its author. The next, however, is no joke; it is taken from a much more pretentious book, highly commended by no less an authority than The Journal of the American Medical Association.

> *Latent heat* is the quantity of heat that must be communicated to the body in a given state to convert it into another state without changing the temperature.

We can hardly stop for more quotations from this author, whose pages are filled with grammatical errors which would put a high school student to the blush. One other illustration, however, which marks the lack of attention to current physiologic literature and a failure to appreciate the bearings of research. It is taken from another author and, as it is somewhat technical, perhaps a word of explanation may be pardoned. One of the most interesting features of the functional activity of the cardiac musculature is the initiation and conduction of the contraction wave. We have long been befuddled by a more or less vague discussion of the automaticity of the heart's action and the intracardiac nerve mechanism. From researches which have long been published it would seem that the nature of the stimulus is chemic, depending on the inorganic salts in solution in the blood and especially those of sodium, calcium and potassium, that the most irritable tissue is that at the roots of the great veins, that the contraction starts here and sweeps by direct muscular continuity over the auricles and thence to the ventricles. The direct muscular continuity between auricles and ventricles was shown in 1883, in 1892, in 1897 and again last year, yet we find, in a text-book just published this year, this bald statement:

> The fibers of the auricles are, however, quite separate from those of the ventricles, the bond of connection between them being only the fibrous tissue of the auriculo-ventricular openings.

These illustrate perhaps only minor defects, many of which may be rectified in a subsequent edition; yet, they undoubtedly increase the difficulties of the teacher who finds his students becoming dissatisfied with books which seem to need such constant and frequent amending. But the greatest defect I find in many of our books is that they are illogical in arrangement, uneven in development, careless and inaccurate in statement, with a strong tendency either to a too full and exhaustive treatment of certain subjects and a slighting of others, or, on the other hand, to such a fragmentary and disconnected statement of physiologic facts as makes them mere cramming machines.

Turning now to the medical schools, the question is more difficult and, for me, still more delicate. Since the days of Hippocrates, Galen, and Sylvius, "medicine, the most difficult of sciences, the most laborious of arts," has been recognized as resting on the tripod of anatomy, chemistry and physiology. Without the information as to structure, composition and function which these several branches of knowledge contribute, the attempt to cure the ills to which flesh is heir is hopeless empiricism. Though the importance of these so-called fundamental branches, the "institutes of medicine," was thus early recognized, not even yet have they been fully differentiated. In spite of the modern tendency toward specialization, a glance at the catalogues of our multitudinous medical institutions will show that, in many instances, the scientific and the so-called practical branches are combined under one chair. The reasons for this are not far to seek, while the rule is not absolute; the tendency to such combinations is more evident in the smaller, unendowed schools.

The objections to such combinations are, perhaps, more easily stated than supported. Nevertheless, it must be obvious that the sum total of human knowledge, in any one of these branches, is so vast as to tax to the uttermost the capacity and resources of any one man. On the other hand, it is equally obvious that the practitioner, whether of medicine, surgery or what not, if he be imbued with the truly scientific spirit, is more keen to recognize the direct and practical application of scientific facts and principles than is the mere specialist, the theoretical anatomist, chemist, physiologist. The day has not yet passed when connection with the teaching staff of a medical institution is recognized as of no little pecuniary advantage to the practitioner. Aside from the direct advantage of incidental dividends, fees and more abundant clinical material, there is the indirect advantage, often still more remunerative, of consultation work—the prestige of the college professor is admitted. Where these positions are sought and held for such purely commercial advantages, the effects must be pernicious on all concerned, practitioners, patients, students, and schools. But—all such unworthy motives aside—consultation honors do not fall equally to all members of the staff. While the surgeon, the internist, the pediatrist, the obstetrician, etc., are much sought after, the anatomist, the chemist, the pathologist and the physiologist are seldom called on for their special knowledge of these subjects. True, the anatomist may be a successful surgeon and the chemist and pathologist consultant analysts, but there seems no call for the physiologist even as a diagnostician. Moreover, in these days of insistent demands for laboratory training for the students and research work for the teachers, no man can hope to give proper supervision to these departments and at the same time build up a living practice; one or the other is sure to suffer in the effort. This fact is recognized in many of our schools to-day by giving the anatomist, the chemist, the pathologist and the physiologist independent incomes, so that they may devote their whole time and attention to laboratory, library and class-room work. In these schools also we find the tendency more and more marked to teach these subjects intensively, and to arrange and apportion them in the medical curriculum with greater attention to sound and logical pedagogic principles than ever before. These indications are hopeful and progressive, but there is a dark side to the picture.

What shall we say of the schools which carry the lame, the halt and the blind among the student class up to their final examinations for the degree, with unsatisfied conditions in the fundamental branches still adding to their gross weight? Here is a man who has managed to worm through an examination in surgery, but is still conditioned in anatomy. It is too great a pity to "disgrace" him by turning him back, so he is coaxed and he is coached, and, again I quote Professor Huxley, "he works to pass, not to know—and outraged science takes her revenge—he does pass and he does not know!"

Of ten well-known and justly-famed institutions communicated with on the subject of conditioned students, only five compel each man to leave no bridge untaken in his rear, but to enter the next with his records clear. This is, I know, a debatable question. There are often incidents and accidents, which prevent a really worthy student from finishing up all the work of a given year by the close of the term; but the privilege of carrying conditions into the next succeeding year should be guarded and hedged about most closely. I am convinced that, more often than not, a real injustice is done to the student through a mistaken sympathy for his shortcomings. Give the student body to understand that there is a time for all things, and see to it that all things necessary be done in that time. The worthy will respond to a man, the unworthy had "better bide a wee."

One other item with regard to the medical curriculum which it would seem to-day must be regarded as an obsolete method of medical instruction, and that is what has been referred to as "the contemporaneous pursuit of a multiplicity of diverse studies." How can we regard that as "graded course" which, at the same time and place and in the same subjects, groups together students of the first and second, or of the second and third years? Perhaps third and fourth year students may, with advantage, attend the same clinics at the same time, but even this is questionable.

With the establishment of state medical examining boards was brought about the divorce of the degree-conferring from the license-granting power. The cause which led up to this measure was undoubtedly the inefficiency and commercialism of many of our medical institutions. Their diplomas were no longer acceptable certificates of proficiency and the great public demanded some further test of capacity and ability before entrusting its vital interests to the recent graduate. Yea, more, this same great public has clothed these state boards with such power and authority that when the boards pipe we, of the schools, must needs dance. But, how have they been constituted and how have they fulfilled their function? On the whole, well and nobly; yet here and there we have evidence of too much politics, too little comprehension of what is best to be done and how best to do it. From the far West we have learned of scandalous favoritism and gross misconduct in the examinations; and here, in the East, examination questions have leaked out in ways that were dark and by tricks most peculiar.

A recent development in state board activity has been the serving of notice on all colleges that they must come up to a certain standard medical curriculum, or—shut up! For that is what it means, practically; no school could long afford to have any state board say "We will not recognize your graduates as candidates for licensure." This effort to secure a minimum standard of medical education is most praiseworthy and timely. No reasonable reciprocity in state medical licensure can be secured otherwise, but if each one of forty odd states is to set up its own standard, regardless of the others, we will have confusion worse confounded. It is a pleasure, here, to pay tribute to our fellow-member and ex-president, Dr. George M. Kober, for his efforts toward bringing order out of this chaos.

If one might be permitted to criticise the questions propounded by such august bodies, I would suggest that many of them are tests rather of the candidate's memory than of his knowledge. They recall the distinction, made by Professor Huxley, between the teaching of the facts of a science as instruction, and the teaching it systematically as knowledge, a distinction to which I shall have occasion to refer again. Another criticism might be that what is needed is a test of the candidate's knowledge of anatomy, chemistry and physiology, as applied to medicine, not as abstract sciences; but this criticism would revert to the schools for, unfortunately, these subjects are seldom so taught.

Certain of the state boards admit undergraduates to an examination in anatomy, chemistry and physiology on completion of the second year of the medical course. The argument has actually been advanced that at the end of the fourth year they have forgotten these subjects! Surely, the legitimate conclusion from these premises is that the practitioner of medicine has no need of them; and, the next follows close on the heels of this, that these subjects might be dispensed with altogether. Why burden the student with them at all? Is it not a significant coincidence that in one state where this custom prevails a medical school has found it necessary to turn its fourth-year students back for a course in physiology with the second-year men? I am free to admit that, as these subjects have been taught in the past and as, I fear, they are still taught in some places, the student would not lose much if they were abolished. But what a commentary it is on our methods of instruction! Is there any wonder that quackery should be so rampant among us? On the one hand, a public disgusted with and distrustful of these mislabeled "doctors of medicine," on the *other* a lot of poor, *ill*-treated ignoramuses who easily drift into the lines of least resistance and find a temporarily profitable outlet for their little accretion of quasi-knowledge in preying on their still more ignorant neighbors. Is there not a really causative relation between the poor cultivation of the medical schools of the past and the mushroom-growth of the innumerable "pathies" of the present? Of all the latter it may be said—as Oliver Wendell Holmes said of the one—"What [in them] is new is not true and what is true is not new." Was the influence of mind on matter, and its applicability in the healing art, unknown before the advent of the Bostonese high-priestess? Had we not known a *little*, and availed ourselves more, of the benefits of rubbings and movements of various sorts before the day of the osteopath?

If all these things be true, and I think the evidence submitted is at least suggestive, there is still room for improvement in our methods of medical education. The public is to-day more intelligent and more discriminating, more generally informed as to progress in our art and science than it has ever been; and I say this in spite of the widespread commercialism, charlatanism and quackery with which we have been infected. Witness, the large endowment of hospitals, institutes, and laboratories for medical research. The economic value of progress in preventive medicine has been signally marked in our island possessions and is even more strikingly demonstrated in the hospitals and camps of the Japanese army. The problems there dealt with have been solved only by men of wide information, broad culture and deep learning. We must turn out more men like these and even larger.

To return to the more specific part of my subject, what may we gain by the study of physiology? First, there are certain facts with regard to the workings of the economy, demonstrable by experimentation and observation. From these facts we may deduce the fundamental laws and principles underlying them. By repeated experiment and comparison by altering the conditions attendant on the various phenomena, we may further upbuild and establish these laws and principles, we may so weigh and balance and value the contributing factors that we can foretell the effects of subactivity or superactivity of any one of them. We have, then, in the study of physiology a training of the memory, but what is of vastly more importance, a training and development of the powers of observation and of logical reasoning; a recognition of the true *relation* between cause and effect. In the more modern laboratory course we have, still further, an opportunity for the cultivation of operative skill and technic. Surely, this is a most essential and practical preparation for dealing with the many problems which daily confront the practitioner.

It must be evident that instruction in physiology should be preceded by instruction in anatomy and chemistry. We can get no clear, comprehensive knowledge of organic function until we understand the anatomic structure and relations together with the chemic constitution of the components of the organism. More than this, no student is prepared to take up intelligently the study of physiology until he has thoroughly mastered the principles of physics. How can we understand the circulation of the blood and lymph without a knowledge of the laws relating to liquids? Or how can we understand the process of respiration until we are familiar with the laws of gases? The laws of motion and of moving bodies are as necessary to an understanding of the movements of the skeleton as are the laws of heat, light and electricity necessary to an understanding of other functions of the body. As has recently been remarked, the comparatively new science of physical chemistry has almost revolutionized our ideas of physiologic problems. Our knowledge of osmosis and electrolytic dissociation has given us a much clearer conception of the process of absorption and the action of various chemic substances in the body.

As a matter of fact, the average student comes to his medical studies with too little preparatory training, with an inadequate store of facts and little or no knowledge of *method*; and, to some of us, he comes too young to appreciate the responsibilities of the work he has undertaken. A course in physics, chemistry and biology, with comprehensive laboratory work in each, should be demanded of every medical matriculant, and this demand should be, not merely on paper, but fortified by an examination to test the efficiency of the qualifications claimed. In the present overcrowded state of the medical curriculum, courses in general chemistry and physics are out of place; we need all the time thus filched from us, by laxity as to preliminary requirement, for courses devoted to the application of these sciences to medicine.

As to the method of teaching physiology, while I am heartily in favor of a comprehensive laboratory course in this branch, I doubt very much whether it be *either* practicable or *advisable* to do entirely away with the didactic lecture; but this should be supplemented by frequent recitations, quizzes, and conferences, everything and anything which will bring teacher and student in *direct personal contact. With regard to the presentation of the subject, a recent able critic*[1] *of a current text*-book is quoted with most emphatic approval:

> Teachers of physiology should concern themselves with the matters of fundamental importance in their science—the matters that determine the direction in which physiology is developing—because these matters are in the end of as great, if not greater, practical importance to the student of medicine as the well-established familiar facts in regard to the more manifest workings of the circulatory, respiratory and other systems. Teachers of physiology must beware lest they in their efforts to be "practical" cease to be scientific, and thus fail to instill in their students that scientific spirit and interest which physiology is sure to call forth when its study is properly conducted, namely, from the investigative rather than the dogmatic point of view. Physicians sink quickly into the slavery of routinism if not animated by a spirit of inquiry, of criticism, of independent judgment. And how are such qualities to grow in our medical students if

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[1] The Journal A. M. A., Oct. 29, 1904, p. 1324.

they are to be denied the stimulus that comes from the study of the living, growing part of sciences of such fundamental import as physiology?

One word more, and I am done. I have recently been asked my "opinion on the subject of a department of applied physiology." I have replied that I am heartily in favor of it. I would put it in the fifth year of the medical course—such as Cornell is planning—and I would place it in charge of a man who has had sufficient experience in general practice to know, not merely to theorize on, the applications of physiology; more than this, I would give him a place on the general staff of the college hospital and require him to demonstrate both normal and abnormal physiology at the bedside. Ultimately, such opportunity and training would develop the physiologist as a diagnostician. The state boards would be less inclined to scale down the value of an examination in physiology to 50 or 70 per cent., as has been done in some places. And the thus demonstrated practical value of this scientific branch of medicine would more clearly justify the expense of modern physiologic laboratory equipment. The field is vast and the fruits already gathered are by no means insignificant. But for applied physiology the surgeon could not operate for the relief of a localizing cerebral lesion, nor could he have warning of an impending intestinal perforation save through blood-pressure observations. The general practitioner and the specialist in nerve and mental diseases would be lost without a knowledge of spinal reflexes. Indeed, about all that we can do, in disturbances of the nerve and vasomotor systems, is the resultant of applied physiology.

With full appreciation of the dangers of dogmatic assertion, I venture to suggest a few of the remedies for the conditions here outlined:

1. Our standard of preliminary education should be raised, and entrance examinations be made more general and more stringent. No student should be advanced to a higher grade until his thorough mastery of the fundamentals has equipped him for an appreciation of their practical bearings. University registration statistics show that the schools which have already effected this are thronged with students.

2. The courses offered in the so-called scientific branches, whether by text-books, by didactic instruction, or by laboratory training, should be at the same time both more scientific and more practical. There is no necessary conflict here, for, after all, "science is nothing but trained and organized common sense."

3. Medical schools should quickly recover their birthright, which they sold for a mess of pottage. It is to their shame that much of recent progress toward higher medical education has found its initiative, not with them, but with the state examining boards.

4. The elevation of our professional standards is a duty which we owe to our patients, to each other, and to the public; its accomplishment will be the full fruition of the high ethical spirit which animates our guild.

1815 *Belmont Avenue.*

The Hairpin in Emergencies.—The hairpin of domestic life may in emergencies be put to a variety of medical uses—as an esthesiometer, a probe, a wire for fractured bones, a cauterizer, a harelip pin, a tenaculum, a nasal or aural speculum, a wound retractor, an aneurism needle, a tracheal retractor, for drainage, as a female catheter and a wound approximator.—*Medical Times.*

CONJUNCTIVAL IRRITATION EXCITED BY PROXIMITY TO A HORSE.*

WILLIAM CAMPBELL POSEY, M.D.

PHILADELPHIA.

A number of years ago I was consulted by a banker from one of the New England towns, on account of a high muscular error, which occasioned marked asthenopia. During the treatment of the case, it was elicited that in addition to the symptoms of eyestrain, the patient was the subject of a peculiar kind of inflammation of his eyes, which occasioned him great annoyance and distress, and from which he despaired of obtaining relief. This affection, as told in his own words, was as follows:

CASE 1.—Since I was 30 years of age, whenever I drive behind a horse, I usually begin to sneeze somewhat during the first mile, but by the end of the second or third mile the sneezing gradually increases until I sneeze once every 100 feet. If the drive is a long one, the sneezing may relax somewhat for a time, only to recur, however, with the same vigor. During this time the eyes are watery and weak, the lids become much swollen and the eyeballs red; the inside of the lids is also discolored, and my whole appearance is that of a person who has been on a very bad spree. After a night's rest the eyes look as well as ever. The time of year has no influence on the irritation, the symptoms appearing in both summer and winter. I thought for a time that the dust raised in driving might have something to do with it, but then I noticed that it was just as bad after sleighing. Then, too, in recent years I have found that, no matter how dusty the road might be, the symptoms were never provoked if I rode in an automobile. I have suffered just as much in the White Mountains as at home, and climate seems to make no difference.

The trouble is greatly aggravated by rubbing my eyes or even by bathing them in warm water, so that I have learned to avoid touching them, as far as possible, after driving. I have had the same symptoms, though not nearly so bad, after stroking a cat, and if I put my hand to my face directly afterward the irritation is much aggravated and I feel tired, "headachy," and as though I had a cold. So far as I know, no other members of my family have been similarly affected, though repeated attacks of sneezing have always been a family trait.

I have never had any treatment which could control the symptoms.

Some time after this, I was consulted by a lad, aged 10 years, who was suffering from an attack of simple conjunctivitis, which he said had been excited by driving in the country.

CASE 2.—It was elicited that driving, or even approaching a horse in the stable, always caused his eyes to water and itch so badly that he was compelled to hold a handkerchief up to them, though he could ride in an automobile without discomfort. He was a subject of hay fever and was compelled to go north in August and September to escape the annoyance of that disease, but even in Maine or in the Adirondacks, whenever he would drive or come near a horse, the irritation in the eyes and nose would reappear.

Examination.—Inspection showed both the bulbar and tarsal conjunctiva to be swollen and injected, and the follicles enlarged. Lachrymation was profuse and the edges of the lids were covered with mucus. Unfortunately no bacteriologic examination was made of the secretion at the first examination, and, as the usual local treatment for conjunctivitis caused a rapid subsidence of the symptoms, when the patient was seen a second time, a few days later, the inflammation had almost entirely disappeared.

Subsequent History.—The patient shortly afterward removed to a distance, so that I have not had an opportunity of observing the case further, but a letter was recently received from him from Pomfret, Conn., where he is at school, saying that the same peculiar irritation of the eyes and nose is still excited by the proximity of a horse, though in recent years his hay fever has caused him but little annoyance.

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* Read before the Section in Ophthalmology of the College of Physicians of Philadelphia, 1905.

Three years ago, I had an opportunity of obtaining the notes of a third case, that of a physician, but as I made the acquaintance of this patient at sea, on a trip to Europe, I had no opportunity of examining the eyes while they were in a state of irritation. A letter directed to him a short time ago brought the following response:

CASE 3.—I am still suffering from the horse. I felt fine this morning when I started out to visit my patients, but had not gone but a few feet when my nose began to run and my eyes to itch, so much so that I have used up four handkerchiefs and had a strong desire to rub my eyes out. This evening I feel tired, "headachy," and as though I had a cold in my head, and it is hard for me to breathe. Now, this has been my daily experience since the snow came. Previous to that time I had done my work in an automobile and never felt better in my life and never thought of my nose and eyes. Two of the coldest days we had, when the thermometer was a few degrees below zero, I had very little trouble, but as soon as the weather moderated a little my trouble began, and now I am hoping for rain to come and take the snow off so that I can take up the automobile and once more be happy. My eyes become red, just as in an acute conjunctivitis, and my nose runs continually and it is hard to breathe through it. It seems to make no difference as to the time of the year nor where I am; if I go into a stable or near a horse I have to sneeze and blow my nose and rub my eyes, on account of itching. When we were in Lisbon (Portugal) this summer we went out to Mafra and Bathalla, where we had to ride some 16 miles. After going but a short distance, I had the same symptoms and it took me some days to get over the effects. Also in Granada, in driving from the hotel to the railroad station, I had a bad attack. We arrived home in October, and a few times during that month, when the auto was out of order, I had to take a horse for a few hours, but always with the same uncomfortable effects.

After a rather careful search through the ophthalmologic literature which might bear on the subject, I was unable to find any reference to this peculiar form of irritation of the conjunctiva, but a rhinologic friend, Dr. W. J. Freeman, told me that the action of emanations from animals on the respiratory tract had been long recognized and that it is a matter of not infrequent observation that attacks of asthma may be excited by the proximity of a cat or other animal. Mackenzie[1] says:

> Some people experience symptoms somewhat analogous to those of hay fever from smelling certain fruits, whilst others are troubled in the same way by the presence of cats, rabbits and guinea-pigs, and Bastian[2] suffered from an affection closely resembling hay fever in dissecting the *Ascaris megalocephala*, a parasite which infects the horse.

Zamiko[3] and Heymann[4] attribute the inflammation of the mucous membrane in these cases to an irritation of the olfactory nerves, others to direct microbic infection. In a paper read before the Seventh Annual Meeting of the American Laryngological, Rhinological and Otological Society, Dr. H. Holbrook Curtis[5] said that in a previous communication he had cited a case in which a man had been unable to live in London since twelve years of age, as he could not pass a horse in the street without having a dreadful coryza. Many specialists in London had experimented with this patient and it had been found that he could ride behind a horse that had been vaselined without the symptoms developing until an hour later. Dr. Curtis added further that some subjects are sensitive to emanations from elephants, cats and mice, and said that he knew several opera singers who were unable to sing after being exposed to such emanations in a room. In a personal communication made to me within the past few days, Dr. S. Wier Mitchell said that in a research on cat fear which he is making, he had come across many cases of conjunctivitis caused by the nearness of cats. In one case, in which he was particularly interested, the ocular symptoms arose in a family where nearly all the members had some means of telling when a cat is present, even though unseen and unheard. He had known of two other persons who had conjunctival symptoms excited by coming near horses; one of these suffered invariably in driving behind a horse, but escaped entirely when mounted on horseback.

The nature of the conjunctival and nasal inflammation which is excited by these animal emanations is, as far as I am aware, unknown, although it would appear that it possesses some association with hay fever. That the process in the two conditions is not identical, however, is indicated by the fact that two of the three cases which have just been reported were not subjects of this disease. It is to be regretted that no bacteriologic study was made in the case which I observed at the time of the attack, though it is probable, from the unsatisfactory results obtained from cultures of the nasal secretion in hay fever, that the findings from the conjunctival secretion in this case would have been negative.

It is of interest, in this connection, to note the observations of Kyle regarding the etiology of hay fever. This investigator is persuaded, after making a series of examinations of the saliva in certain individuals afflicted with hay fever and those not so affected, that in some cases the causes, direct or indirect, of local irritation in the nasal mucous membrane are brought about by chemical change in the constituents of the secretions of the mucous-secreting glands. With a system so predisposed chemically, the contact of a pollen or of an irritating salt like ammonium, is sufficient, by provoking the flow of secretion from the mucous membrane, to precipitate an attack of local inflammation. Dr. Kyle has recently written to me that he has seen a number of cases of nasal and conjunctival irritation excited by animals, in which the symptoms were almost identical with those of hay fever, and in nearly all of which the secretions showed an excess of the ammonia salts. While this theory explains the cause of the susceptibility of certain individuals to affections of the mucous membrane, it does not designate the nature of the agents which excite the irritation, so that it is impossible, therefore, at this time, to do more than conclude that the irritation of the conjunctiva in the class of cases under discussion, is occasioned by a peculiar individual susceptibility to certain substances, chemical, bacteriologic or otherwise, which emanate from the horse.

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1. Text-Book on Diseases of Throat and Nose, vol. ii, p. 307.
2. Med. News, Philadelphia, April 17, 1883.
3. Die Krankheiten der Nase, p. 257.
4. Die Nase, vol. iii, p. 67.
5. The Immunizing Cure of Hay Fever.

THE ETIOLOGY OF CHOROIDITIS.*

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The following observations regarding the causal relations of choroiditis with rubeola are the results of observations of numerous cases of this disease which have come under my observation. It has always seemed to the writer that the pathology of choroiditis has not been so definitely established or defined as to enable the practitioner to feel that he has at his command any remedy on which he can rely with definite expectation as to good results, and, in the majority of cases treated, the result has been either partial improvement, a negative result, or gradual loss of vision.

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* Read before the Florida State Medical Association, 1905.

In standard works on ophthalmology, the following causes of choroiditis are mentioned: eruptive diseases, syphilis, rheumatism, dysentery, meningitis, thrombosis, and infection by pyogenic organisms; the three last named causes are probably sequelæ of other diseases. Exposure to light is also mentioned as a cause, to which may be added traumatism.

The following case report suggests an infection of the deeper ocular structures following an attack of rubeola:

Patient.—F. L., a white boy, aged 7, previously in good health, passed through an attack of rubeola, which terminated Jan. 25, 1899, his vision remaining good up to January 31.

Examination.—On February 1 he was found to be totally blind. Ophthalmoscopic examination showed choking of both optic discs and obscurity of blood vessels, with areas of inflammatory exudate scattered through the fundi of both eyes, a typical picture of choroidoretinitis. V. O. D. = 0; V. O. S. = 0.

Treatment and Result.—After treatment by mercury and potassium iodid, followed by strychnin, by February, 1903, V. O. D. = 20/100 +; V. O. S. = 20/30 +. Ophthalmoscopic examinations showed evidence of marked choroidoretinitis, with atrophy, pigment patches and the other sequelæ of choroidoretinitis. Vision was not improved by glasses.

This is one of many such cases that have fallen under the writer's observation, and it is to this so-called benign disease, rubeola, as a cause of choroiditis, that I desire to direct attention, not to speak of the many other serious ills that follow in its wake.

Physicians who have treated many cases of rubeola have noticed the severe complications involving the lungs, intestines and other viscera. In connection with this, the question naturally arises as to how it involves the deep structures of the body. Knies, in his work on the eye in general diseases, states that optic neuritis, with consequent blindness, may occur from meningitis as a complication of rubeola. Stack, quoted in Knies' work, describes cases of hemiplegia and hemianopsia as sequelæ of rubeola, also keratomalacia. Seeking for the channel of transmission by which infection could reach the eye, we naturally turn to the blood vessels. We find that Knies also speaks of endocarditis as a result of pyemia leading to hemorrhages, thrombosis and abscesses. He states that, as a result of rubeola, numerous ecchymoses are to be found in the conjunctivæ and retinæ, and that there is also congestion of the optic nerve. Numerous capillary emboli and miliary abscesses are also to be found in the optic nerve. Again, Knies states that the affections which may occur with infectious diseases may be summarized as follows: Hemorrhages in peripheral and central visual apparatus, foci of fatty degeneration in central organs, inflammatory changes in blood vessels (endarteritis), iritis, cyclitis, choroiditis or neuritis. While choroiditis frequently invades both eyes, it has been my observation that, following the rule incident to the dual life of man, by which, while one side may be entirely incapacitated, the other will retain its life and usefulness, this disease is apt to attack one eye, leaving the other entirely intact, or to affect one eye to a slight degree only. It has been shown that rubeola has been followed by hemiplegia or hemianopsia, and that as a result of the infection endocarditis and endarteritis may occur. These conditions may extend into the capillary terminals of the vascular system causing the thrombi, miliary abscesses, etc., previously mentioned, and such conditions are evidently most likely to attack or to make the most decided impression on only one side.

The frequent unilateral attacks of choroiditis may be compared with hemianopsia. If the lesion involved the tract there would probably be choroiditis on both sides involving the nasal or temporal side of the fundi, as in hemianopsia, depending on the involvement of the right or left optic tract or chiasm and necessarily associated with hemiopia; inasmuch as this is not the case, the disease is probably in the vascular system and dependent on endarteritis, obliteration of small blood vessels, and later, atrophy. These conditions of primary congestion and inflammation, followed by secondary atrophy and dislocation of choroidal pigment, is the condition which is usually treated with such remedies as potassium iodid and mercury, jaborandi, sweating, etc. These the writer has used, but the results obtained have been unsatisfactory. On the contrary, he has felt that the integrity of important viscera, especially the stomach and kidneys, has been jeopardized by the large doses used in the effort to cure the disease. If these drugs be valuable at all, he believes they will be most so in the early stages of the disease before atrophy has begun. It is to be hoped that good will come in the near future from the immunizing or curative properties of antistreptococcus serum in cases of rubeola. Until such time as a remedy or preventative agent can be found, it is desirable that rubeola be placed on the list of dangerous and destructive diseases, with the same quarantine regulations applied to it as to scarlatina, diphtheria, etc.

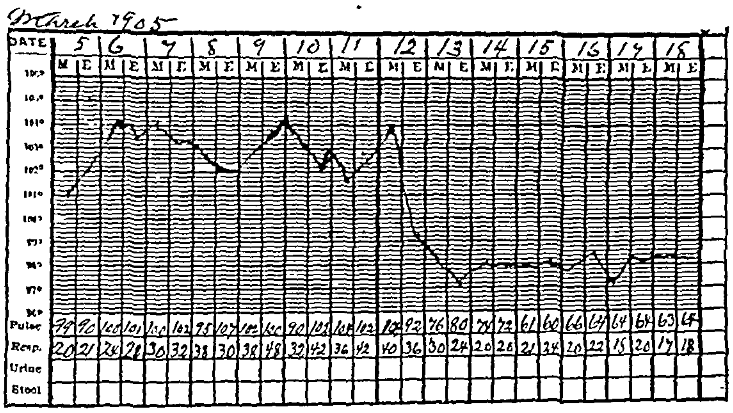
THE APPLICATION OF ICE IN LOBAR PNEUMONIA.

P. A. AURNESS, M.D.
MINNEAPOLIS.

It may be of interest to report a line of treatment of lobar pneumonia that I have carried out for a number of years with no deaths.

The treatment may be outlined as follows: As soon as a diagnosis of lobar pneumonia is made, the patient is given a full warm bath, for cleansing purposes, put to bed and given a laxative dose of calomel and soda. A systematic, routine examination and recording of the general condition of the patient is followed by a careful examination to outline the chest area of the lung tissue involved. This being noted, one or more, as the case may demand, specially constructed ice bags are moderately, but evenly filled with crushed ice and applied so as to accurately cover the chest surface of the parts inflamed. Each bag is wrapped in a thin layer of gauze, and is kept in place by a broad chest binder, while the distal end of a drainage tube, attached to the lower part of the bag, is placed in a basin below the patient's bed. The ice bag is made from a soft, but substantial quality of rubber, shaped to fit in under the axillæ, with a smooth posterior wall and having an airtight screw-top cover to close the filling opening in the front wall. The main and important feature is the arrangement for securing drainage of the water from the melted ice as fast as it is formed, thereby establishing a constant and uniform ice application and utilizing the remarkable heat-absorbing quality of melt-ing ice, which, it will be remembered, is 80 times greater than that of ice cold water, measured by a calorimeter in centigrade degrees. That is to say, given equal weights of ice and of ice cold water, *it will take* 80 calories or heat units more to melt the ice than it takes *to raise* the temperature of the water one (1) degree. This explanation is made in order to understand fully the importance of draining the water in an ice bag, inasmuch as ordinary *ice bags soon after being applied* render only the service or effect of ice cold water.

In using the drain ice bag, there need be no fear that the vitality of the parts so covered, on account of such increased cooling effect, can be destroyed or damaged for the simple reason that a process of liquefaction of the ice is taking place and not one of freezing or reduction of the body temperature below the freezing point, as might be the case were freezing mixtures applied (as salt and ice—1 to 2). These facts being the basis for the construction of drain ice bags, their use in lobar pneumonia up to the approach of crisis has been adopted in the way described and with the further instruction to the attending nurse, that the ice application must be carried out as faithfully and conscientiously as the administration of any drugs. She is instructed to see that each bag—sometimes as many as seven bags are required—is kept moderately filled and accurately replaced and that no obstruction to the free discharge of water takes place, and that the bulk of air is forced out, thereby making the pressure of the outer air hold the ice in any desired thickness in the collapsible bag. Morning and evening examinations of the patient are made and the ice application is adapted to correspond to any increased inflammatory area. Should the pulse at any time cause anxiety by increased rapidity, etc., a drain ice bag is also placed over the cardiac region, usually alternating two hours on and off as long as is considered necessary to calm and to strengthen the heart. Headache and delirium are quieted by applying a similar ice bag to the head. Occasionally, when high temperature is persistent, cold spongings are added.



The ice application is kept up continuously as long as the patient's temperature, pulse and respiration indicate that the disease is progressing, and as long as no threatening signs of collapse make their appearance, in which case of course all ice application is promptly removed and such stimulation resorted to as may be required, consisting of increased doses of brandy, strychnin or digitalis, till conditions have improved or till crisis has occurred. The internal medication during the whole course of the disease besides the required stimulants, includes liberal doses of some mild alkaline mineral water, from 4 to 6 glasses a day, and creosote carbonate every 4 hours in doses ranging from 5 to 15 drops. The bowels are kept open with saline laxatives and saline enemas. The diet is guided by the capacity of the digestive apparatus. Proper ventilation of the sick-room is maintained with an upper window open more or less all the time.

Such, then, has been the treatment given to more than a hundred cases of lobar pneumonia with no deaths and without complications to retard recovery. Among these were 5 cases of double lobar pneumonia, in 4 of which Dr. J. W. Bell of the University of Minnesota was called in consultation, and in which the prognosis offered, in spite of the frightful mortality in such cases, was sustained by the recovery.

The points of special interest noted during the treatment were:

1. A distinctly lowered pulse rate with maintenance of cardiac strength and regularity, considering temperature of patient and stage of the disease.
2. If the treatment is begun during first 12 hours of the disease many cases are aborted and in the majority of cases the duration of the disease is shortened.
3. Respiratory difficulty and chest pains are relieved by the ice application to such an extent, that not a single patient remonstrated against the "ice treatment," after first having tried its quieting and analgesic effect.

The last case treated entered the Norwegian Deaconess Hospital March 5, 1905, with lobar pneumonia on the right side, and in the course of 4 days pneumonia of both lungs developed. The pulse, as indicated on the accompanying chart, illustrates the preservation of cardiac power as witnessed during this line of treatment, the highest pulse rate observed being 104.

THE EXPANSION OF GYNECOLOGY, AND A SUGGESTION FOR THE SURGICAL TREATMENT OF INCONTINENCE OF URINE IN WOMEN.*

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President of the American Gynecological Society.
CHICAGO.

The general law that progress in any direction is characterized by specialization, with its attendant classification and simplicity, has been exemplified in no great movement more strongly than in the development of the medical profession during the last three decades. The late Samuel D. Gross, foremost general surgeon of his day, after a long period of active service as author, teacher and practitioner, writing the preface to the sixth edition of his System of Surgery in October, 1882, thus early gives credit to specialization for the unparalleled advances in modern surgery. Specialization, he says in substance, has penetrated with its methods and instruments of research the innermost recesses of the human body, and in a comparatively brief period has achieved triumphs which general surgery perhaps never would have accomplished.

In the earlier period when the specialist confined himself to a particular organ, disregarding its relations to the general system, when frequently exclusive books appeared from this author, for example, on the stomach, or from that one on the brain, specialization was cumbersome, narrow, ineffective and a hindrance to scientific medicine. Finally, the logical tendency to study each part not by itself but in its essential relations to the whole system, gave rise to such a welding together into a great unit of all the specialties, that any organ even though recognized in its individual importance and autonomy at the same time was equally recognized as subject to general law. It then became apparent that physiological and pathological processes, such as circulation and infection, were substantially the same whatever the organ involved. Order then came out of chaos and specialization became a potent factor in the simplification and progress of medicine. From this time forward laryngology, rhinology, orthopedics, ophthalmology, neurology, climatology, state medicine, obstetrics and gynecology rapidly developed and became identified in all parts of the civilized world with remarkable groups of men who have strengthened scientific medicine by building up these departments to an extent unequaled in any other period of history.

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* President's address delivered at the annual meeting of the American Gynecological Society at Niagara Falls, 1905.

In nearly all of the medical teaching centers of America and Europe the most conspicuous specialty of modern medicine, gynecology, has enjoyed full recognition not only in the day of its early struggle, but later in the period of its highest development, with the significant result that in dignity of position and in output of scientific product it has in many respects outbalanced the department of general surgery itself.

The progress of gynecology has been marked by two pronounced periods: The first was an earlier period, characterized by great activity in the perfection of numerous plastic operations on the vaginal side of the pelvic floor. This development of minor plastic surgery calls to mind many familiar names at home and abroad, most conspicuous among them the names of two of our founders, Emmet and Marion-Sims. The second or later period was one of tremendous progress in the surgery of the obverse abdominal side of the pelvic floor. Now a third period is before us in which gynecology has taken to itself the whole field of abdominal surgery.

The early gynecologist was logically led by the anatomical, physiological and pathological unity of the reproductive organs into the peritoneal surgery of the pelvic cavity and thence by anatomic continuity into that of the upper abdomen. In peritoneal surgery, his educated touch, his special surgical judgment, and, above all, his training in the technic of plastic gynecology, placed him on a decided vantage ground over the general surgeon.

This widening of limitations to include the territory of abdominal surgery has given rise to an extraordinary and altogether interesting effort on the part of the general surgeon to promulgate the erroneous idea that the gynecologist has become a general surgeon and thereby has forced gynecology as a specialty into the background, where any one, even without special preparation, may practice it. Thus we hear of "The Merging of Gynecology into General Surgery." "The Passing of a Great Specialty." "The Expansion or Obliteration of a Specialty." We are told that gynecology is a finished subject, and that "he who runs may read," that it is only a matter of a few operative procedures, that the technic of it is now perfected and ready-made for the hand of any one, that soon in medical journals, in text books, in medical schools, in societies and hospitals, gynecology will be merged into general surgery and the name will be forgotten.

In considering this most recent attitude toward gynecology I do not refer to the practitioner who may be so situated that the most competent experts are not available: necessarily he may be compelled to the best of his ability, not for himself alone, but in the interest of his patient, to undertake not only gynecology, but all the other specialties, nor do I deny that a general surgeon of sufficient versatility may carry on miscellaneous surgical work and at the same time if he will undergo the necessary long and careful training, may acquire the special judgment, the special diagnostic and operative technic essential to proficiency in the practice of a great specialty; but this admission does not weaken the indictment which I would offer against a type of general surgeon, whose number increases day by day, whose relation to this specialty is the outcome of a reasoning all his own, a reasoning from the plausible premise that "the gynecologist, having perfected and simplified his specialty, has found it too narrow and has expanded" to the specious conclusion that gynecology is an insignificant branch and that the gynecologist therefore has undertaken general surgery. This logic gives rise to a sophistry; if the gynecologist is a general surgeon, conversely the general surgeon is a gynecologist. As the times change and we change with them, this type of universal operator, quick to seize on and to turn to his own account the intimation that this specialty has passed, with refinement neither of diagnostic nor operative technic, with no appreciation of his limitations, hypnotized by an apprenticeship of six weeks in some postgraduate school, or by no apprenticeship at all, emboldened by the fact that no one has called him to account, would make gynecology crude and common, would persuade the public and the profession that it is a mere caudal appendix to surgery on which no one fears to tread. Let us for the moment dismiss the general discussion of the subject and imagine a private hospital conducted under certain practical conditions of business management and promotion, with a year of active practice in capital operations, most of them belonging to this, forsooth, insignificant branch of surgery and a mortality of 70 per cent., and then with this experience as a background, going on for an additional few weeks to eleven more consecutive abdominal operations and 100 per cent. of mortality. Does this sound like a made up story? On the contrary, it is an extreme but nevertheless historical example taken not from the dark ages of surgery but from our own times.

Gynecology has not passed. We are not general surgeons. We are specialists in the diseases of women, and as our later transactions abundantly show, we are to a rapidly increasing extent specialists also in the wider field of abdominal surgery, a field in which the account on the ledger as it stands to-day will show general surgery indebted to us for a great part of its practical and scientific progress; the claim is valid, for we were blazing the trail through this territory when it was an untrodden wilderness, and it is ours by right of discovery; we were giving laws to govern the conduct of the stranger in this field when it was unknown and unconquered, and it is ours by right of conquest; we received from the pioneers, our teachers, some of whom are with us now, the principles and precepts on which has been built up this most aggressive department of surgery, and it is ours by right of inheritance.

Marion-Sims was not a general surgeon when he laid down the laws which to-day govern the surgery of the gall bladder, when he foreshadowed the modern treatment of gun-shot wounds of the abdomen and thereby set in motion a tide of general abdominal surgery of which the ebb flow, particularly in the upper zones of the abdomen, where we have joined hands with the general surgeon, is already overdue. Do the traditions which properly belong to us count for nothing? Shall we re-clitoris, and to either side of the urethra throughout the entire length of it, as shown in Figure 1.

Second Step.—The meatus is drawn up to a point near the clitoris and is secured there by means of two sutures (Figs. 1 and 2). The lateral portions of the denuded surface are now closed, as shown in Figure 3. The effect of the operation is to replace and to retain in its functional relations the sagging displaced urethra. It will be observed that the two first sutures necessarily stretch the urethra upward to the region of the clitoris and that the lateral sutures must tend to hold it in its new position. By this means, it is proposed to straighten out the urethrocele, by longitudinal traction, and by lateral traction to collapse and to hold together the dilated walls of the urethra and thus to overcome the sacculation at the neck of the bladder where residual urine is apt to accumulate and give rise to trigonitis, cystitis and possible incontinence.

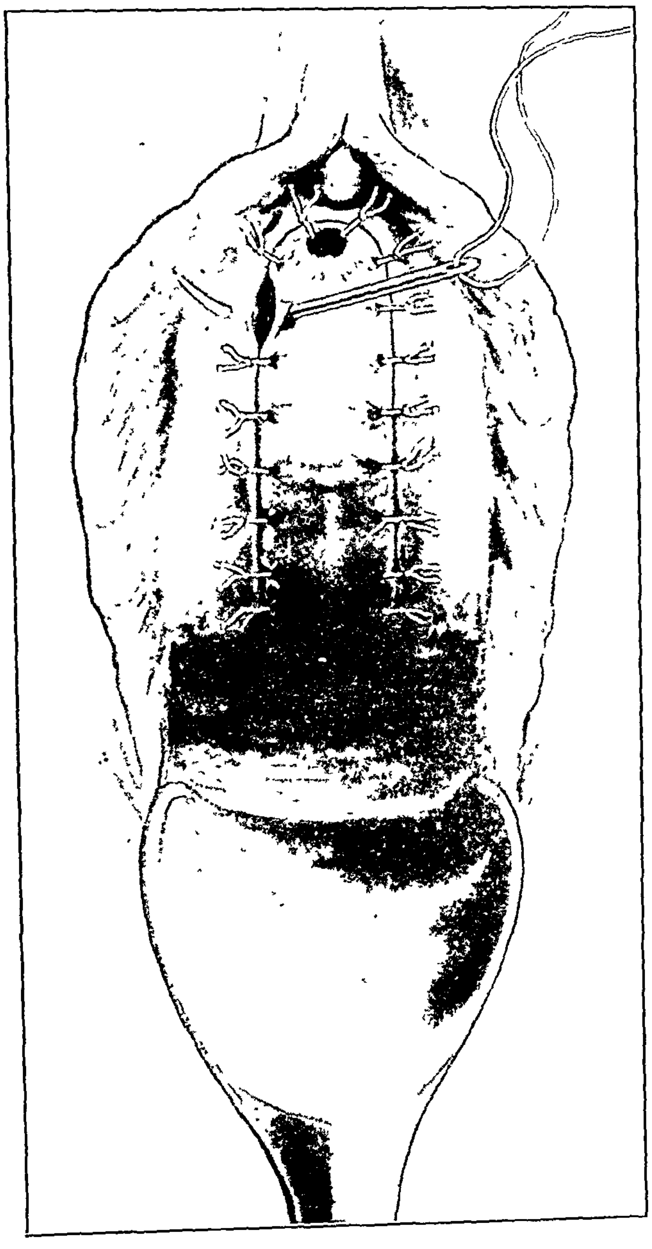

Fig. 3.—Last suture being introduced to complete the operation. The previously sagging urethra is here shown as extended and held firmly up against the pubes in its normal relations. While the lateral sutures are being passed it is well to have the meatus strongly pulled up toward the mons veneris by means of a tenaculum hooked into it and held in the hand of an assistant.

In many cases, it will be necessary to combine with the operation some appropriate surgical treatment for an associated cystocele and in nearly all cases to perform perineorrhaphy to relieve also relaxation of the posterior vaginal outlet. In one case, I saw fit to narrow the pouching urethra in order to overcome the urethral dilatation.

I have performed this operation five times since January 1, 1905. In the first four cases, relief from incontinence was immediate and, so far as I can learn, has been continuous. The last operation is too recent to be taken into account here. In one case, there was so much relaxation of the skin and other soft parts in the region of the clitoris that I feared the sutured urethra might pull these structures down to the old malposition instead of being held up by them, but so far it remains well in place. In such a case again, or in the event of recurrence from such a cause, however, I should be disposed to make a deep oval denudation over the pubes on the mons veneris just above the clitoris, the longer axis of the oval being directed transversely, and to unite the margins of this wound by a transverse line of union so as to make the clitoris a fixed point on a sufficiently high plane to hold the urethra taut. For obvious reasons, this procedure would be preferable to the removal of the clitoris and the union of the meatus to the parts thereby exposed.

The patients operated on so far are too few and the time since the operations were performed has been too short to warrant any prediction of future results, but the meager and unsatisfactory literature on the subject and the intractable nature of the disorder in spite of such treatment as we have at our command lead me to place before you this record of my own observation. The operation is so simple that I have been rather surprised not to find myself precisely anticipated in every particular, but so far as I have been able to learn, the operation, in some essential respects at least, is novel. If it should be found, however, that I am duplicating the work of another, I desire to make due acknowledgment in advance, "for I would call no other man's labor my own."

STENOSIS OF THE PYLORUS IN INFANCY.

AN ANALYSIS OF 115 CASES.

CHARLES L. SCUDDER, M.D.
Surgeon to the Massachusetts General Hospital.
AND
WILLIAM C. QUINBY, M.D.
BOSTON.

(*Concluded from page 1671.*)

PROGNOSIS.

The prognosis of these cases of infantile pyloric stenosis if untreated surgically is practically hopeless. A few patients are said to have recovered under expectant treatment.

Batten's[14] case resulted in an apparent cure after several months of nasal tube lavage and dieting. An acute attack of vomiting and diarrhea occurred and the patient died when 11 months old. The autopsy showed a pylorus admitting a probe only 4 mm. in diameter; a narrow pylorus. The symptoms evidently abated under medical treatment, but the condition was not cured.

That these cases may be benefited temporarily by medical treatment is likewise illustrated by the report of Shaw.[24]

Finkelstein,[26] Senator,[27] Saunders,[17] and Stamm[28] report instances of recovery following partial stenosis of the pylorus, that is, in subacute or in chronic cases. Finkelstein's cases were three and were from Heubner's

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26. Finkelstein: Jahr. f. Kinderheilk., 1896, vol. xliii, No. 1, p. 105.
27. Senator: Berlin. klin. Wochft., 1897, No. 2, p. 44.
28. Stamm: Munich med. Wochft., 1904, vol. ii, p. 232.

clinic, seen at 9, 9 and 4 weeks of age, respectively. They had been vomiting since they were respectively 5, 3 and 3 weeks old. There was gastric distension and visible peristalsis. They were treated by regular breast nursing, lavage of the stomach, rectal feeding, laxatives and small doses of opium. They are said to have recovered. Of course, the correctness of the diagnosis in these cases may never be absolutely established.

Moreover, if there existed in these so-called cured cases relative stenosis we do not know yet what the completed story may be. The stenosis may at any time become absolute. The child may have periodic attacks of vomiting, and may suffer all its life from gastric disturbances, from malnutrition and from a train of dependent conditions.

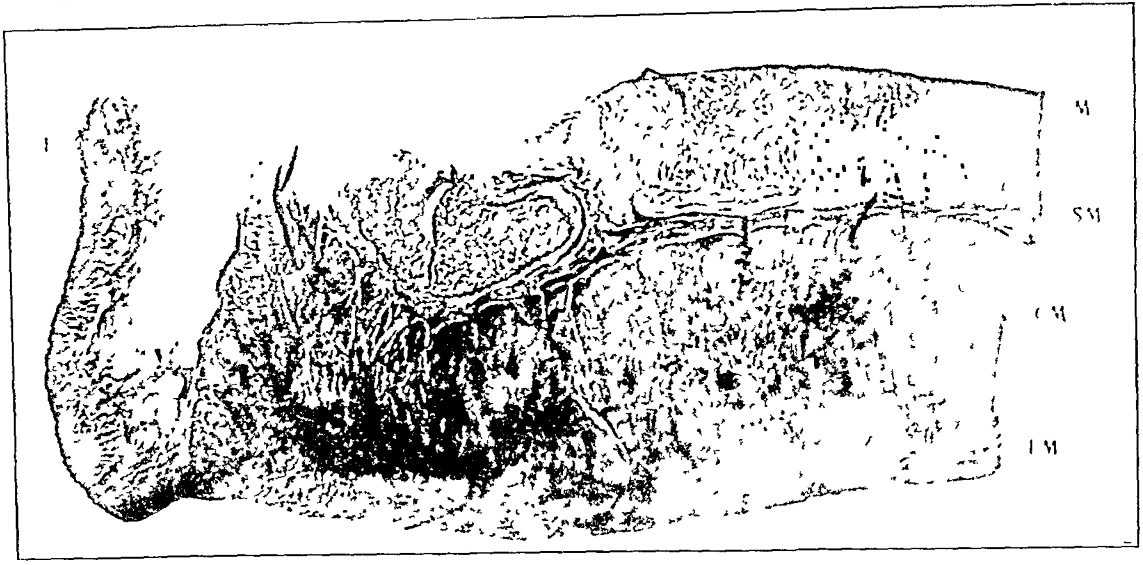

Fig 9.—First symptoms appeared at 6 weeks. Died at 2½ months Stomach distended. Pyloric tumor Pyloric wall thickened. Lumen, 2 mm Mucous membrane in longitudinal folds No signs of ulceration, fibrous thickening of submucosa, hyperplasia of circular fibers, thickening of longitudinal long fibers also M, mucosa, SM, submucosa, CM, circular muscle, LM, longitudinal muscle, I, intestine (Dorning, Archives of Pediatrics, 1904.)

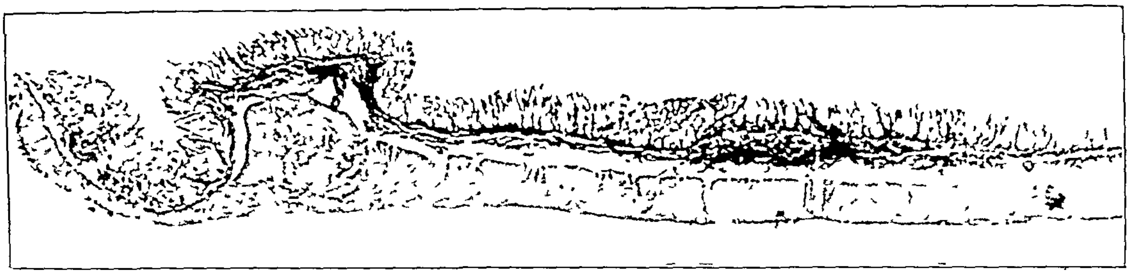

Fig 10.—Section through the normal pylorus, duodenum and stomach of a child 3 months old The muscular coat is rather thicker than normal The duodenum lies to the left (Cautley and Dent, Medico-Chir Trans, vol lxxxvi.)

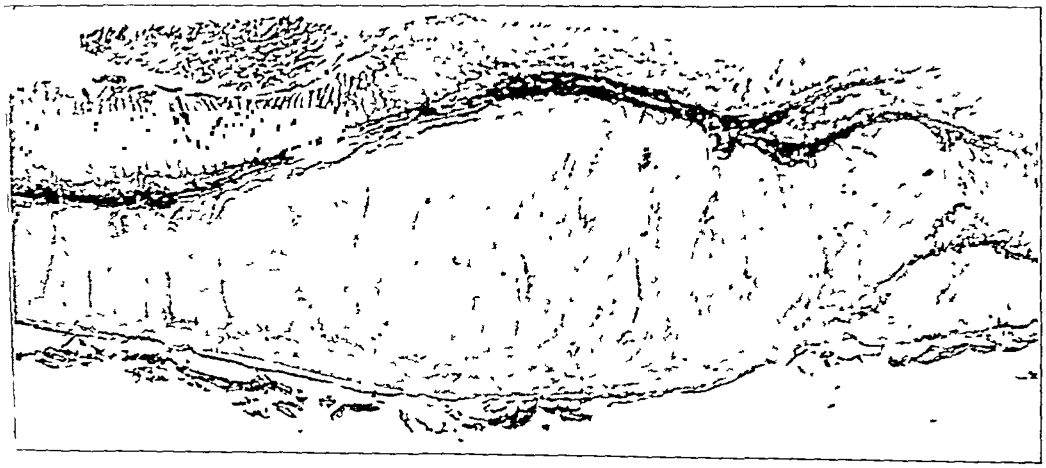

Fig 11.—Section through the pyloric end of the stomach in the case of a hypertrophied pylorus of a child of 3 months The thickening of the circular fibers commences in the stomach wall some distance from the pylorus The muscular coat at the commencement of the duodenum is thickened The duodenum lies to the right Compared with Figure 10 (Cautley and Dent, Medico Chirurg Trans, vol lxxxvi.)

I very much doubt the permanence of the cure in cases treated medically. To withhold operative treatment after the diagnosis of pyloric obstruction has been made leaves the case practically hopeless, according to the evidence available.

There are probably cases of narrowing of the pylorus operated on during childhood and adult life, as described by Maylard,[29] which are to be regarded in a class by themselves. No hypertrophy is found in these cases, only a simple narrowness of the pyloric lumen. It is unnecessary to associate these in any way with the infantile pyloric hypertrophy group.

TABLE 4.—TABULATION OF ALL OPERATIONS.

OPERATION.	Cases.	Recovery.	Died.	Mortality Percentage.
Gastroenterostomy......	40	21	19	47.7
Loreta.................	11	7	4	36.3
Pyloroplasty...........	8	4	4	50
Pylorectomy............	1	..	1	100
Total..................	60	32	28	46.6

TABLE 5.—GASTROENTEROSTOMY RECOVERIES.

NAME.	Date.	Symptoms. Age at Beginning, in Weeks.	Symptoms. Duration in Weeks.	Age at Operation in Weeks.	Well latest report.	Operation.
Fritzsche............	1899	2	4	6	1½ yrs.	Ant.
Kehr	1899	4	3	7	....	“
Kehr	1900	4	4	8	8 mos.	Post.
Abel............	1899	3	5	8	13 days.	Ant.
Schotten	1903	2	3	5	3½ mos.	“
Löbker............	1898	9	1	10	2 yrs.	Post.
Monnier............	1901	2	4	6	5 mos.	Ant.
Stiles............	1904	5	5	10	13½ mos.	Post.
Stiles............	1904	..	..	6	3½ mos.	“
Giles	1904	5	2	7	3 mos	“
Trantenroth	1901	1	4	5½	6 mos.	Ant.
Munro	1904	1	3	3	6 mos.	Post.
Elting	1904	..	20	64	9 mos.	Ant.
Stiles............	..	..	..	..	....	
Stiles............	..	..	..	..	....	
Nicoll	1900	..	..	..	....	A or P
Nicoll		..	..	..	....	“
Nicoll		..	..	..	....	“
Nicoll		..	..	..	....	“
Nicoll		..	..	..	....	“
Nicoll............	Oct. 1904	..	..	..	....	

TABLE 6.—GASTROENTEROSTOMY. DEATHS.

NAME.	Date.	Symptoms Age at Beginning, in Weeks.	Symptoms Duration in Weeks	Age at Operation, in Weeks.	Death.	Remarks.	Operation.
Bull.........	1904	2	2	4	12 hrs	....	Post.
Meyer	1898	1	3	4	30 “	Button......	'nt.
Schotten.........	1902	4	2	6	14 “	Very weak	Post.
Löbker.........	1899	..	..	7	....	Peritonitis	“
Stern	1898	3	4	7	24 hrs.	Evisceration ...	“
Jordan.........	1903	..	..	..	....	....	“
Jordan.........	1903	..	..	..	..	....	“
Mackay.........	1903	4	16	20	36 hrs.	....	“
Munro	1904	3	4	7	23 “	....	“
Stiles.........		..	..	5	Soon.	....	
Mikulicz.........	1903	..	..	12	2 mos.	Perforating ulcer.	Ant.
Bottomley	1904	5	3	8	10 days.	Very weak	Post.
Meyer.........	..	..	..	..	.....	....	?
Stiles	..	..	..	..	.....	....	...
Stiles.........	..	..	..	..	.....	....	...
Stiles.........	..	..	..	..	.....	....	AorP
Nicoll.........	..	..	..	..	.....	....	...
Nicoll.........	..	..	..	..	.....	....	...
Nicoll.........	..	..	..	..	.....	....	...

SURGICAL STATISTICS.

What has surgery thus far accomplishel for pyloric stenosis in infancy? Sixty operations have been performed on 59 patients. These are all the operative cases of which satisfactory records exist up to January, 1905 (Table 4).

Of these 60 operations, 40 were gastroenterostomies; 21 recovered (Table 5), 19 died (Table 6), a mortality of 47.7 per cent. Of these gastroenterostomies a little more than half were posterior operations and the others were anterior operations. The place of the anastomosis, whether *anterior or posterior, apparently* did not affect the mortality rate in these particular cases, except in one instance, which will be mentioned later.

There were 11 divulsions of the pylorus or Loreta operations, 7 recoveries and 4 deaths, a mortality of 36.3 per cent. (Table 7). There were 8 pyloroplasties, with 4 recoveries and 4 deaths, a mortality of 50 per cent. (Table 8). There was one pylorectomy and one death.

A grand total of 60 operations, with 32 recoveries and 28 deaths. A general mortality of 46.6 per cent. (Table 4.) That is, out of 60 cases operated on more than half were saved, 53.5 per cent. These results are certainly brilliant. They represent the achievements of 28 different operators, facing in almost every instance a most desperate problem.

TABLE 7.—CASES OPERATED ON BY DIVULSION OF PYLORUS.

NAME.	Date.	Symptoms. Age at Beginning, in Weeks.	Symptoms. Duration in Weeks.	Age at Operation, in Weeks.	Results.	Remarks.
Nicoll.........	1899	7	5	12	R	Well 3 years.
Schmidt.........	1900	3	5	8	R	Well years.
Lendon	1902	2	..	..	D	Lap., 11 weeks.
Mackay.........	1903	5	1	6	D	After 22 hours.
Stiles.........	1902	..	..	6	R	Well 1 year.
Stiles.........	1902	..	3	3+	D	Perforation.
Stiles.........	1904	2½	2	4+	R	Well 2 years.
Burghard.........	1903	..	..	8	R	Well 7 months.
Stiles.........	Gast	roen	teros	tomy	R	Failure.
Nicoll.........	...	....	....	....	D	Six days. Failure.
Nicoll.........	...	....	....	....	R	Failure in 6 months.

TABLE 8.—CASES OPERATED ON BY PYLOROPLASTY.

NAME.	Date	Symptoms. Age at Beginning, in Weeks.	Symptoms. Duration in Weeks.	Age at Operation, in Weeks.	Results.	Remarks.
Dent...........	1902	3	5	8	D	Enteritis.
Dent...........	1902	3	3	6	R	
Dent.	1904	2	5	7	R	
Campbell	1904	2	6	8	D	Six days.
Braun...........	1901	1	5	6	D	Twenty hours
Guthrie		6	..	..	R	Well in 7 months.
Dent...........	1903	..	..	5	R	
Granboorn	1902	1	2	3	D	Six weeks.
	Pyl	o r e	c t o	my		
Sitles	1900	....	....	9	D	Thomson's Case.

No apologies are needed to the critics of surgery for the comparatively large mortality of 46.5 per cent. Had not these particular cases been operated on they all probably would have died. Many were almost moribund when placed under surgical care.

These operations have been done since 1898, that is, during the past seven years. This period is a part of the formative or developmental period of gastric surgery. Operative technic is only just reaching its perfection. Important improvements in technic are only now beginning to be adopted. Taking into consideration, therefore, these facts, namely, the yet unsettled question of the best procedure, the faulty technic and the fact that the child was *presented* for operation as a last resource; after medical experiments had failed, these immediate results are encouraging. As for the end results of sur-

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29. Maylard: British Med. Jour., 1904, No. 1, p. 416.

gical treatment we are in the possession of data regarding 14 or 15 cases out of a total of 53; all are well, from several months to three years after operation.

There are certain facts of interest which should prove surgically instructive in connection with pyloric stenosis of infancy.

The first case was operated on in 1898 by Meltzer,[30] in New York, a posterior gastrojejunostomy was done with the aid of a Murphy button. The child died because of intestinal obstruction due to the use of too large a button. (Figs. 15 and 16.)

Löbker,[31] July 25, 1898, performed the first successful operation, a posterior gastroenterostomy by suture. For two years after operation the child was perfectly well. Abel[15] is often credited with having performed the first successful gastroenterostomy, but the records of his case state that the child was discharged on the thirteenth day after operation and no further facts are available. One can hardly assume that the child made a complete recovery. Löbker's case was certainly far more accurately reported and should have the first place awaiting further news from Abel.

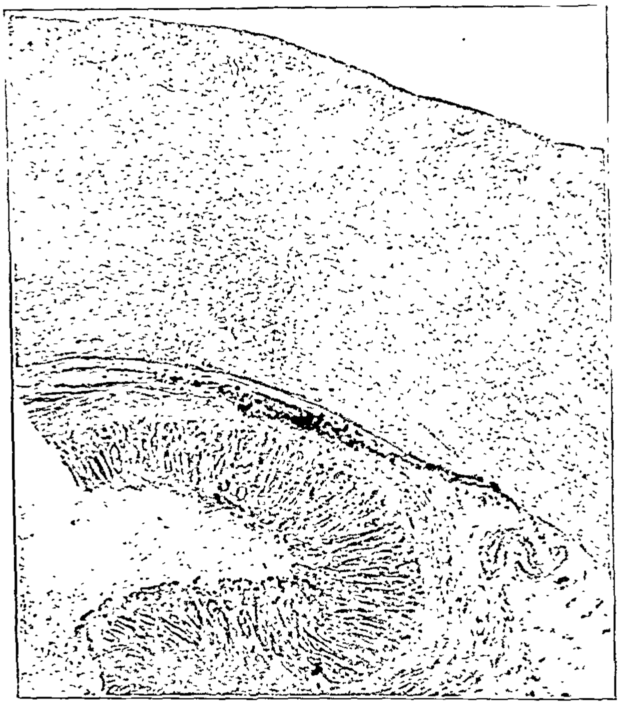

Fig. 12.—Section through the pylorus of a child 3 months old, who had an hypertrophy of the pylorus which resulted in death. The pylorus was 1.5 cm. long, 1.3 cm. in diameter. Note the tremendously thickened circular fibers which have been cut at right angles to the long diameter of the gut. The longitudinal fibers have been cut transversely; their bundles are clearly seen. (Munro-Townsend, Magrath.)

Nicoll[19] records the first case of divulsion of the pylorus—the first Loreta. The operation was performed July 25, 1899. The child recovered and was in good health three years subsequently.

Braun records the first pyloroplasty performed Oct. 18, 1900. The child died in twenty hours after the operation.

Gastroenterostomy, divulsion, pyloroplasty and pylorectomy are the four procedures which have been employed in these cases of infantile pyloric stenosis.

The majority of the operative deaths occurred soon after the operation and were due to the weakened condition of the child. In the last analysis, however, this weakened condition was due to the ignorance of the attendant, whether surgeon or physician is immaterial, who did not make an early enough diagnosis or persisted too long in expectant treatment.

Meltzer's patient died not because he used a Murphy button, but because he misused the button, employing one too large for the small lumen of the child's intestine, a death, therefore, occasioned by faulty technic.

Mackay's patient died because, in doing a gastroenterostomy, the redundant mucous membrane was not excised. The redundant mucous membrane blocked the opening formed by the operation. The symptoms persisted and the child died. Autopsy demonstrated the cause of death to be a faulty technic. Littlewood of Leeds, England, first suggested the excision of the mucous membrane in a gastroenterostomy. Moynihan has mentioned that the Murphy button happily accomplishes the same result by causing a pressure necrosis.

Stern's[32] patient died, probably, because of the additional shock occasioned by the escape of the intestines through the abdominal incision. The intestines were with difficulty replaced. An accident very liable to happen, but also the result of faulty technic.

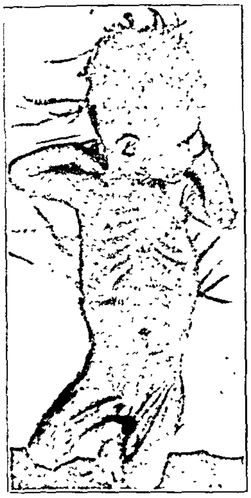

Fig. 13.—Child alive. Demonstration of gastric peristalsis and pyloric tumor. (Fisher and Nield.)

Schotten,[33] Munro,[34] Meyer,[35] each had very debilitated children on which to operate.

Löbker's[31] patient died of a peritonitis due to leakage from the bowel occasioned by a poorly placed suture, i. e., faulty technic.

In one of Stiles' cases the Loreta operation failed to be permanently beneficial and a subsequent gastroenterostomy resulted in curing the child.

In one of Stiles' cases of the Loreta operation, the patient died of peritonitis occasioned by a perforation of the duodenum. The perforation was made while dilating the pylorus. In another Loreta operation, Lendon's[36] case, a relapse occurred and the patient died at a subsequent exploratory laparotomy, at which nothing was done because of the many adhesions found! In Mackay's Loreta case the patient died of obstruction from redundant mucous membrane. In Campbell's[37] case, a pyloroplasty, the patient died because of the obstruction occasioned by the redundant mucous membrane, which was not removed at the time of the operation. Trantenroth was unable in one instance to stretch the pyloric sphincter; it was tough and would not yield. He did an anterior gastroenterostomy. The child recovered. In Campbell's case of pyloroplasty the suturing produced a kink which may have contributed to the cause of death.

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[30] Meltzer: Med. Rec., 1898, p. 253.

[31] Löbker: Verhandl. d. deutsch. Gesell. f. Chir., vol. xxix, 1900, No. 1, p. 148; 1901, No. 1, p. 158.

[32] Stern: Deut. med. Wochft., vol. xxiv, 1898, p. 601.

[33] Schotten: Sammlung klin. Vorträge, N. F., 1904, No. 368.

[34] Munro: Boston Med. and Surg. Jour., 1904.

[35] Meyer: Med. Rec., Aug. 20, 1898.

[36] Lendon: Australian Med. Gaz., December, 1902, p. 558.

Mikulicz has reported a most interesting case. He did an anterior gastroenterostomy on a child with pyloric hypertrophy of extreme type. The immediate relief was satisfactory, but the child died two months later of a peritonitis occasioned by a perforating jejunal ulcer. This child had no increase in HCl in the gastric juice. As Mikulicz suggests in this particular case, the HCl could not have been the cause of the ulcers.

The problem presented to the surgeon by these cases of pyloric stenosis in infancy is similar to the problem which confronts him in the stenosis of the pylorus of adult life except for the conditions dependent on the age of the patient. These conditions are of very great importance. The operation will always be in the nature of an emergency, no matter how soon after birth it is performed. The parts to be operated on in comparison with the adult anatomy are very, very tiny! (Fig. 19.) The overcoming of the obstruction demands a procedure at once rapid of performance, safe and efficient for the emergency and calculated to afford permanent relief.

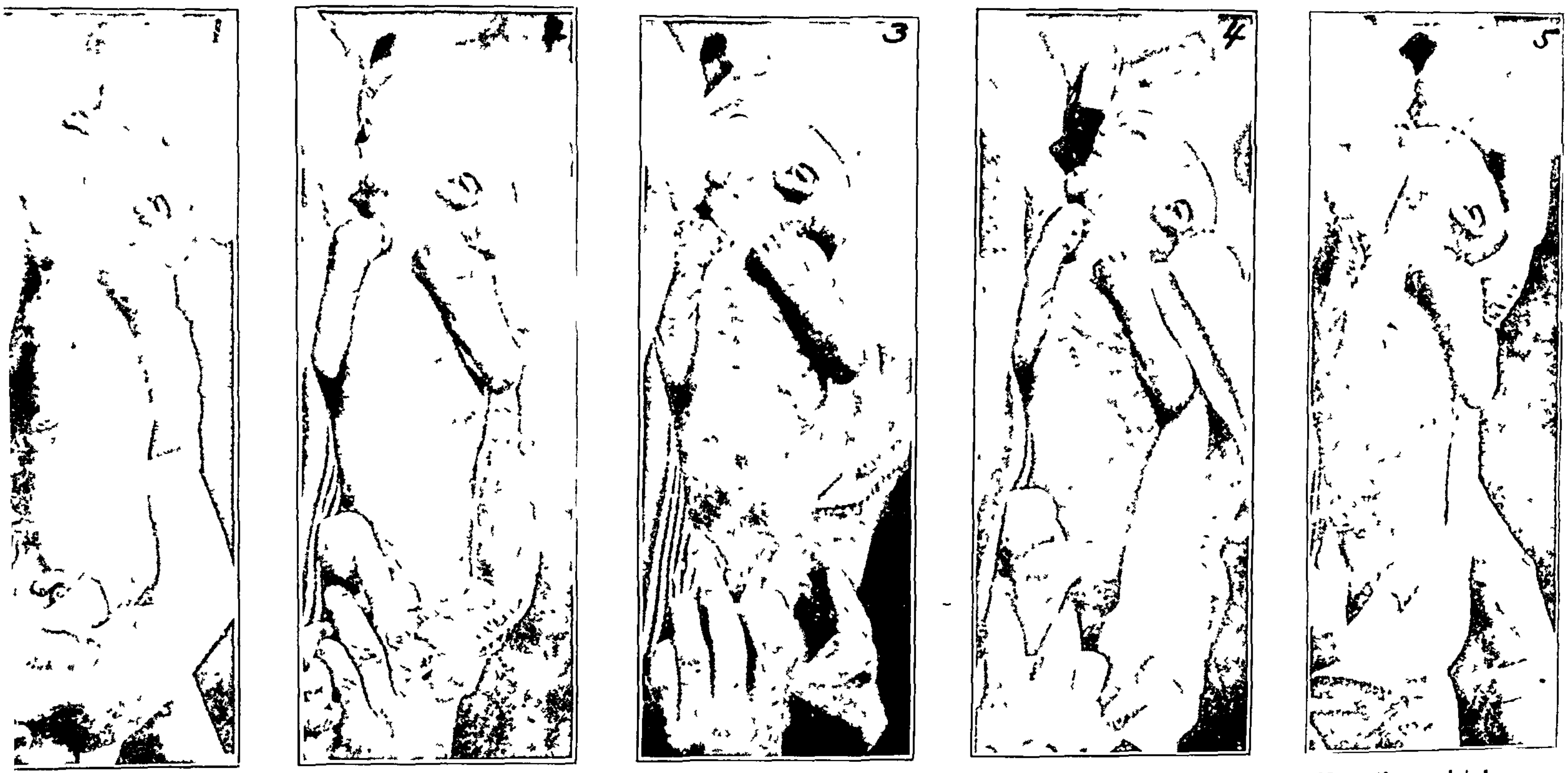

Fig. 14.—Photographs of a living child, showing the emaciated condition present in hypertrophy of the pylorus Note the peristaltic wave passing over the stomach from right to left. (Fisher and Neild, Bristol Medico Chirurgical Journal, June, 1904.)

Rapidity is essential to success, for these tiny patients are easily shocked by delay and by tedious manipulations. To insure rapid operating the surgeon should be particularly familiar with the procedure selected and with the technic of its proper performance. These may seem idle words, but this review of the work done in these cases is a sad commentary on what might have been. I personally believe that so much depends on skilled judgment in the selection of the proper procedure in each case of stomach surgery, to speak broadly, and that so much depends on the familiarity of the operator with the tiny essential details of the technic used in the carrying out of the procedure that stomach surgery should be done, not by every surgeon, but by those who have fitted themselves especially for it and who have demonstrated themselves to be prepared for it.

Rapidity necessitates simplicity of procedure and familiarity with the technic necessary for its accomplishment. The operation must be safe and free from causative factors of shock, namely, sepsis, hemorrhage, prolonged manipulation and loss of body heat. Sepsis will be avoided by emptying the stomach of any unvomited residue previous to operation after anesthesia, by the use, when feasible, of rubber-covered clamps to prevent the escape of the contents of the stomach and intestine, and the prevention of hemorrhage. These small patients bear the loss of a little blood poorly.

Isolation of the operative field is important, so that practically all work may be done outside the abdominal cavity. It is important to handle the parts gently and as little as possible. It is necessary to wash the exposed parts with warm saline solution before restoring to the abdominal cavity, and it is also important to replace the part handled as nearly as possible in its nor anatomic relations. It is necessary to wrap the patient in sheet wadding or warm small blankets or to use a warmed operating table. Moderate stimulation is wise; rectal nutrient enemata previous to operation often have a wonderfully good effect on these little patients.

The use of subpectoral or rectal saline injections immediately after operation is extremely helpful. All these ordinary measures, especially in babies, diminish shock, and attention to these details is essential to success.

Which method of overcoming the obstruction will prove most efficient and lasting? In these cases reported the Loreta operation of divulsion was several times unsatisfactory. The Loreta operation has likewise proved inefficient in adult cases. Recurrences have been noted both in babies and in adults. Accidents have happened during the performance of a Loreta operation. The pylorus is so small that the gut has been ruptured, wi subsequent fatal peritonitis.

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[37] McCaw Campbell British Med Jour, June 25, 1904, p 1483

The mucous membrane in certain Loreta cases has been damaged by the great pressure necessary to the proper performance of the operation, and danger from subsequent cicatrices is not absent. Despite the apparent lower mortality, this method is inefficient, unsafe and, therefore, not to be used. Nicoll[19] of Edinburgh uses the Loreta method together with a gastroenterostomy in cases that are not too ill to have both of the operations done at one time. It has been found physically impossible to dilate the pylorus in some of these cases.

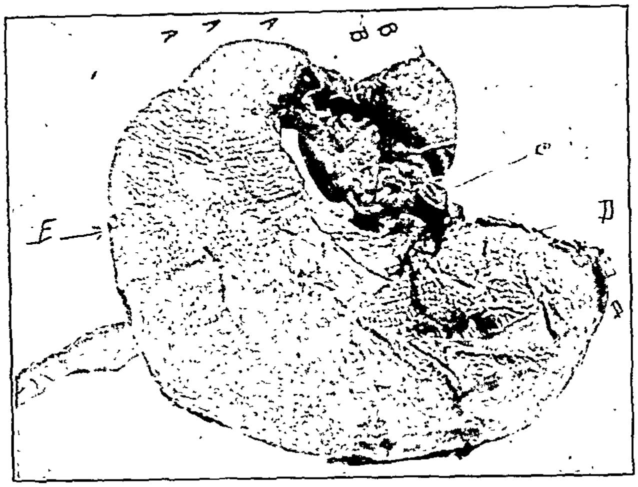

Fig. 15.—(Meltzer's case.) Anterior view: A, pylorus; B, dilated duodenum; C, cardium; D, fundus; E, pyloric part; F, distal jejunum. (Meltzer, Trans Asso. Am. Phys., vol. xiii, p. 188.)

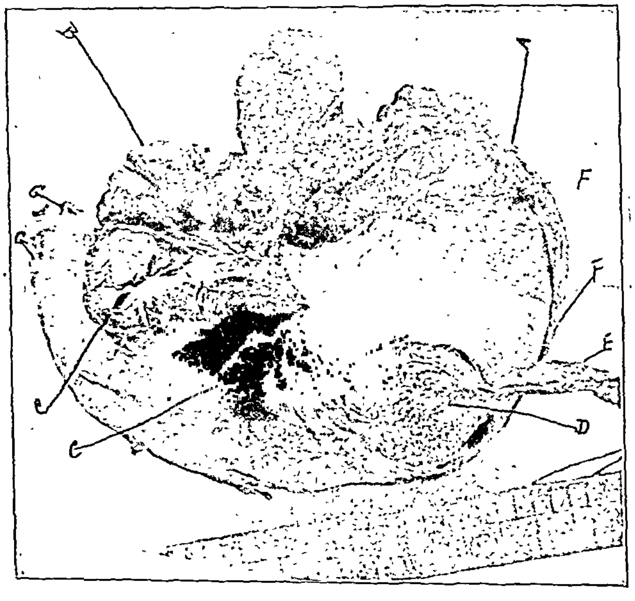

Fig. 16.—(Meltzer's case.) Posterior view: A, pylorus; B, dilated duodenum; C, dilated jejunum; D, Murphy button; E, distal jejunum; F, pyloric part of stomach. G, fundus. (Meltzer, Trans. Asso. Am. Phys., vol. xiii, p. 188.)

Pylorectomy is obviously too severe an operation. Pyloroplasty has its advocates in the Englishmen, Cautley and Dent.[38] and there is no doubt that certain cases have done well after this operation. It is a procedure with which one should be familiar and which should be practiced in a certain few of these cases in which the pyloric tumor is small, and in which it can be done without kinking the gut.[39] Personally I am not attracted by pyloroplasty. Both Robson and Moynihan say: "Pyloroplasty, on account of the great thickness of the pylorus and its rigidity in the whole circumference, is applicable."

Some form of gastroenterostomy is the operation best suited to the conditions, but an anterior gastroenterostomy is to be avoided, if possible. Taking all operations together, more trouble subsequent to operation in adults has arisen after an anterior gastroenterostomy than after a posterior one; and the likelihood of jejunal ulcer exists (See the case of Mikulicz). There are in adult life 16 reported instances of jejunal ulcer, nearly all following the anterior operation. Robson has just added a case to this ulcer list.

The mesentery of the baby's jejunum is short in proportion to the width of the gut as compared with the mesentery of the adult gut. It has been found impossible in several cases to do an anterior gastroenterostomy because of this shortness of the mesentery. (Fig. 18.)

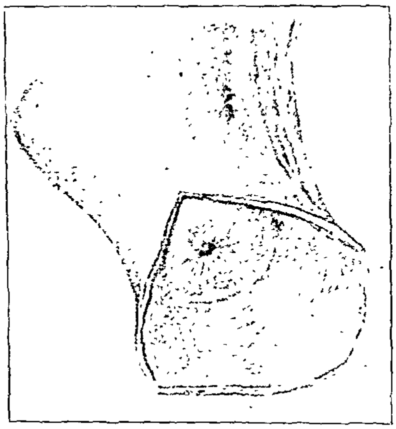

Fig. 17.—The appearance of the pylorus, looked at from the duodenum; from a case of hypertrophy of the pylorus; age of child, 3 months. Note the sharp line of demarcation between pylorus and duodenum.

Nature suggests the posterior method. In most cases a posterior gastrojejunostomy with no loop will prove satisfactory and feasible.

The gastro-pyloro-duodenostomy, first suggested by Finney of Baltimore, may meet the conditions existing in certain of these cases of infantile pyloric stenosis. The incision divides the obstructing stenosed part and allows the stomach to empty its contents into the duodenum at approximately the normal anatomic location.

In many cases this form of gastro-pyloro-duodenostomy in the adult patient has proved satisfactory. Adhesions about the duodenum and pylorus and the normal fixation of the duodenum sometimes offer serious difficulties to the performance of Finney's operation in the adult, but in these cases of pyloric stenosis in infancy no such objections hold. The duodenum is very mobile even to the median line of the body. No adhesions are ever found.

If for any reason, such as rigid or large tumors, the Finney operation is not feasible, Köcher's gastroduodenostomy may prove useful. The duodenum is so freely movable that it may be placed in contact with the stomach so as not to kink *the first portion of the duodenum.*

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[38] Cautley and Dent: Lancet, 1902, vol. ii, p. 1679; Medico-Chirurgical Trans., 1903, p. 474.

[39] Adhesions of the pylorus, subsequent to pyloroplasty such as are recorded in the adult—Heinecke-Mikulicz operation—and because of which it has been abandoned by some, probably may be avoided by omental grafting.

My feeling, then, with regard to the operative procedure to be used in a case of infantile stenosis of the pylorus is that the posterior gastroenterostomy, without a loop, *made as snug to the origin of the jejunum as is possible*, has first choice. A Finney operation, a Köcher gastroduodenostomy and a pyloroplasty in some cases may be of value. The whole matter is too unsettled to definitely and finally commit myself to any procedure.

The care after operation is of the most vital importance. These little weak patients respond to good care, gentle stimulation and careful feeding. If possible an expert in the feeding of babies should have charge of the diet. It may require some coaxing to establish the child's life on a certain basis. Rectal feeding may be needed for a few days after operation. The baby should be kept absolutely quiet and not handled unnecessarily. One operator thought the baby might be operated on and then carried home in the arms of its mother, several miles into the country. This was not done, however, and after the operation it was doubtful for a day or two whether the baby would live or die. The baby lived, but had it been carried immediately home from the hospital it probably would have died. These matters seen ordinary and of minor importance, but they are vital, and it is the attention to all little details which sometimes turns the scales.

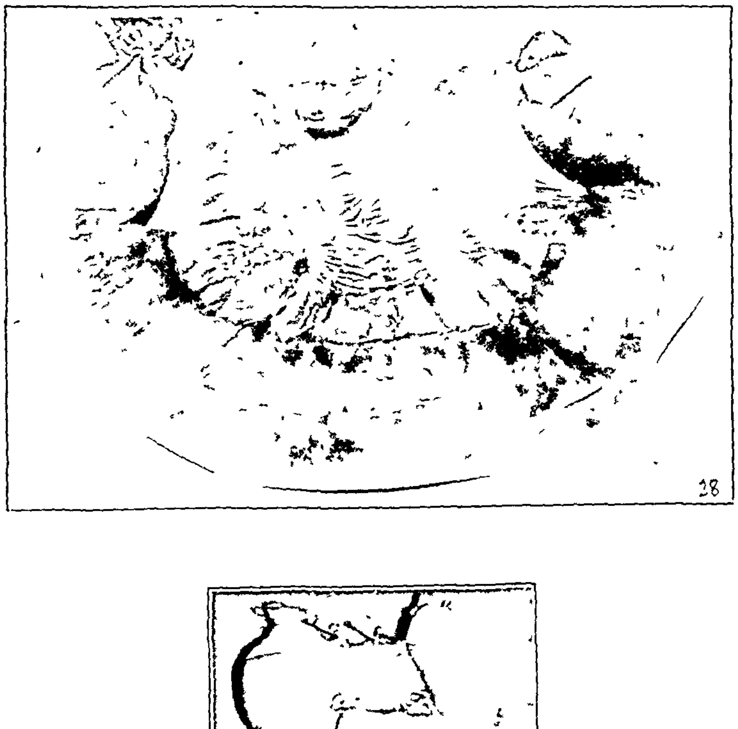

Fig. 18.—The intestine of the adult and of the infant with its mesentery intact. Photographed to similar scales. Note the relative short mesentery of the infantile intestine.

I have purposely avoided a discussion of the etiology of this affection because I feel that it is still on a theoretical basis. Little of practical value can come from such a discussion at present. Suffice it to say that there are three theories suggested:

1. That the hypertrophy of the pylorus is a primary congenital overgrowth of the sphincter muscle. This view is entertained by Nicoll.

2. Thomson believes the hypertrophy to be secondary to an incoördinated action of the stomach muscles, dependent on functional disorders of the gastric nervous system, *resulting in gastric spasm.*

3. The hypertrophy, according to Pfaundler,[12] is due to a spasmodic contraction because of gastric irritation after birth. There are many facts supporting these views. All agree, however, that there is hyperplasia of the circular pyloric fibers. Why and where this hyperplasia occurred it is impossible to determine at present. The discussion is fascinating, but at present unprofitable.

We may accept as true the evidence of the existence at birth of hyperplasia of the pyloric sphincter. I think also that from clinical evidence we may accept as true the fact that after birth there is often, if not always, a spasmodic contraction of this hypertrophied pylorus. More than this we can not accept on the present evidence. I have avoided using the term "congenital hypertrophy" because it involves the etiologic factor. I think that the term "pyloric stenosis of infancy" implies nothing not yet proved; it seems, therefore, to be the better term.

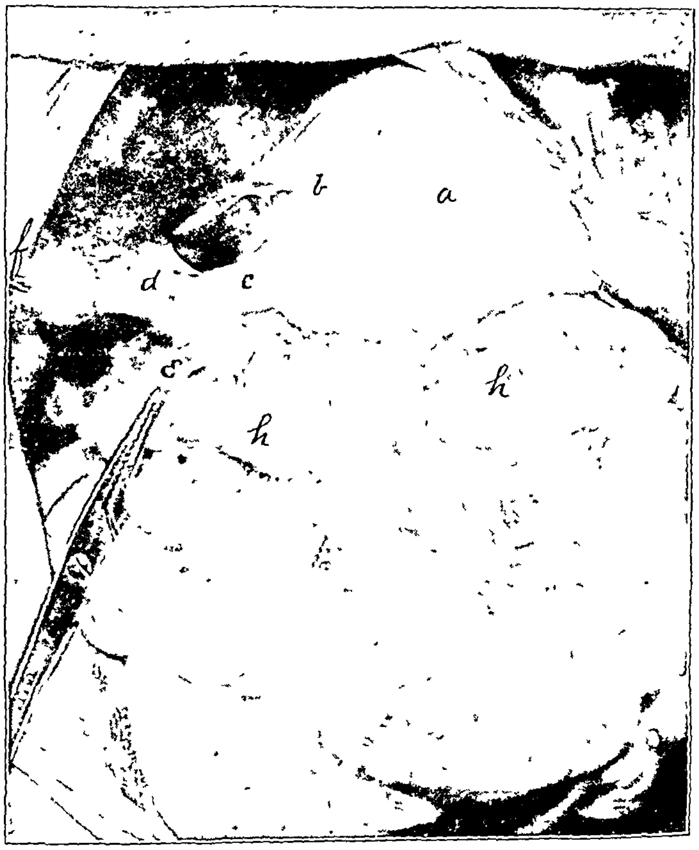

Fig. 19.—Autopsy photograph of a child about 1 year old. Note: (*a*) stomach, (*b*) lesser curvature, (*c*) pylorus, (*d*) gastrohepatic ligament, (*e*) great omental border, (*f*) gall bladder, (*h*) transverse colon.

Our idea of the prognosis of these cases of pyloric hypertrophy is not influenced in the least by the hypothesis we may entertain of the etiology. There is as yet no evidence that patients said to have recovered under medical treatment had this disease. There are cases, already referred to, however, in which the diagnosis of pyloric stenosis had been made, and in which a cure was supposed to have taken place. These patients subsequently died and autopsy demonstrated that the stenosis had persisted after the supposed cure.

Monnier[40] thinks that the mortality without operation is about 80 per cent. If the truth were known I am persuaded that the medical mortality would be above this figure.

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[40] Monnier: Deutsch. Zeits. für Chirurg., 1901.

When should the physician summon the surgeon? As soon as the diagnosis is made, and before the diagnosis is made in all doubtful cases. When an infant persistently vomits and does not improve after a fair experimentation with feeding in the many ways known to the skilled pediatrist, the case should be regarded with suspicion and pyloric stenosis considered. The physician and surgeon should work over these cases together. The physician, by being keenly alive to the existence of the affection which is no longer a medical curiosity, but is more common than has been supposed, should contribute his accurate observations to a clearer knowledge of the disease. The surgeon, realizing the difficulties of diagnosis, should approach a possible case of the affection with discrimination, being careful not to operate unnecessarily.

The surgeon should not operate because the medical attendant brings him a case which he thinks needs operation. The surgeon should operate only after personally weighing the evidence and being convinced by it.

The pathologic evidence conclusively demonstrates the uniformity of the lesion. The clinical evidence associates with this lesion a typical and an atypical symptomatology. Medicinal treatment has yet to demonstrate its power to cure this affection. Surgery, on the other hand, has proved its ability under adverse circumstances to cure more than one-half the cases entrusted to it.[41]

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[41] Other references consulted are the following: Bernheim · Karr corresp bel f Schw. Aertz, 1904, xxxiv, p 257 Blachadder: Brit Med Jour., 1901, vol i, p 765 Clogg · The Pract, November, 1904 Cleveland: Brit Med Jour, 1904, vol i, p 1073 Dent: Brit Jour. Chil. Dis, 1904, vol. i. Dorning: Arch Ped, September, 1904, p 681. Elting: Albany Med. Ann, January, 1905 Fritzche · Dis Zurich, 1900, p 156; Centlbl. f. Chir, 1901, p 119 Fenwick: Disorders of Digestion in Infancy and Childhood, 1897 *Fletcher: Trans Path Soc London, vol. l,* 1899 Freund: Mitt. a. d Grenz Med Chir, 1903, p. 309 Flynn: Australasian Med Gaz, December, 1902; Münch med Wochft., 1903, No 29, p 1274 Fisher and Neild · Bristol Med-Chir. Journal, 1904, vol xxii, p 123, Centbl f Chir, vol xxxii, p 945 Giles. Australasian Med Gaz, Aug 20, 1904 Granboorn · Monatsch f. Kindhk, No 3, 1902 Guthrie and Murray · Reports of the Society for the Study of Diseases in Children. Gran Jahr f Kindhk, vol xliii, 1896, p 118 Hammer · Prag med Wochft, 1899, No 3, p 25 Herman · Arch Ped, January, 1901, p 293 Henschel Arch f Kindhk, 1891, vol xiii, p 32 Ibrahim. Munch med Wochft., 1903, No 31, p 1359 Kehr Verhand der Deutch Gesellschaft f Chir, 1900, vol i, p 124 Knoepfelmacher: Wein klin Wochft, Dec 20, 1900 Koplik: Diseases of Infancy and Childhood, Lea Bros, New York, 1902 Lange Munch med Wochft, 1901, No 7, p 280 McCaw and Campbell. Brit Med Jour, June 25, 1904, p 1483 Nordgren · Munch med Wochft, 1903, No 4, p 179 Neurath Centbl f d Grenz Med Chir, 1899 Pedden Trans Glasgow Path and Clin Soc, 1892 Pitt · Trans Path Soc London, 1892, vol xliii, p 63 Rivière Lancet, 1902, vol ii, p 1750 Rolleston and Hayne · Brit Med. Jour, April 23 1898 Schmidt Arch f klin Chir v Langenbeck, vol lxiii, 1901, p 977 Selter Monatsch f Kindhk, No 6, 1902 Schultze Proc New York Path Soc, 1901, p 80, N S T Simonsohn Diss Greefswald, 1903, p 38 Southworth Arch Ped, January 1901 Trantenroth Centbl f Chir, No 38, 1902, p 1004 West Arch Ped, 1903, p 750 Weill and Pehn: Lyon Medicale, Dec 9, 1900, p 505 Wachenheim, F L · Amer Jour Med Sciences, April, 1905, p 636 Ibrahim Die Angeborene Pylorustenose im Sauglingsalter George F. Still London Lancet, March 11, 1905, p 632

Facts About Portland, Oregon.—Portland is the principal city of the northwest coast. The chief export commodities are lumber, flour and grain. The city does a wholesale business of $175,000,000 annually, and the product of its factories was $50,000,000 last year. The name of the "Rose City" has been given this western metropolis on account of the large number of beautiful roses that are constantly in bloom here all the year round. The climate is exceptionally mild on account of the warm currents of the Pacific Ocean. It is the first rank of American cities for health, the death rate being only 9.5 per 1,000 of population.—*Sunset Magazine.*

ANKYLOSIS.

ARTHROPLASTY—CLINICAL AND EXPERIMENTAL.

JOHN B. MURPHY, M.D.,

CHICAGO.

(Concluded from page 1678.)

Case 8.—Mr. Z.; Bohemian, aged 26; was admitted to Mercy hospital April 19, 1904.

Present Illness.—Patient does not speak English and it was impossible, therefore, to obtain a perfectly accurate history. Through an interpreter he stated that stiffness in the right elbow began to develop about ten years ago, and progressed steadily until the joint was completely ankylosed at a right angle. He stated positively that there was no acute inflammation in the joint at any time, and that he had never injured the elbow. From his statement it would seem that the lesion was from the first an ankylosing arthritis. No other joints were involved and his general health was good. He gave no history of tubercular or of specific trouble.

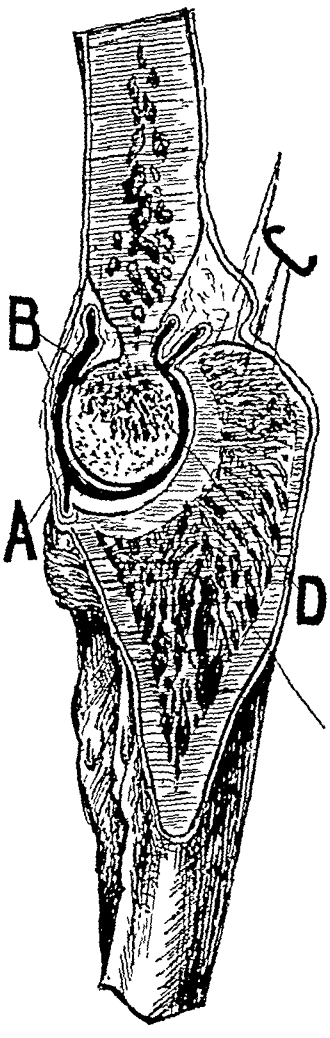

Fig 29.—Case 8 Showing disposition of synovial membrane in elbow joint (Toldt).

Examination.—The patient is of medium stature, rather poorly nourished. The right forearm was flexed at a right angle, and there was absolutely no motion in the elbow joint. The muscles of the arm were atrophied to an extreme degree from non-use, as were those of the forearm, though to a lesser degree. No swelling existed about the elbow joint, except over the articular surface of the radius, where the bone was somewhat thickened. The olecranon fossa was partly filled by bony deposit.

Operation.—April 20, 1904. Esmarch's constrictor was applied to the arm. A vertical incision 6 inches long was made on the posterior surface of the right elbow directly over the olecranon. It extended from two inches below the tip of the process to 4 inches above it, and exposed the surface of the olecranon and the deep fascia, covering the triceps. The skin and subcutaneous fat were dissected laterally from the bone and fascia for 1½ inches on each side of the incision, and the edges of the wound were widely retracted. A pyriform flap of the deep fascia was dissected from the posterior surface of the triceps. The flap was 4½ inches long by 2½ inches wide at its upper end, and received its blood supply through a broad pedicle which remained attached to the muscle and fascia just below the level of the tip of the olecranon. By means of a long curved needle threaded with a heavy silk carrier, a wire-saw was passed around the base of the olecranon and the latter severed from the ulna. The bone was sawn through in an oblique direction from within outward, in order to secure broad bony surface for subsequent union. After separating with chisel and mallet the bony connection between the olecranon and the humerus, the former with triceps attachment undisturbed, was retracted upward and the interior of the joint exposed. Examination showed firm bony ankylosis which involved the entire elbow joint. The synovial membrane and cartilage had been destroyed, and not a vestige of them remained. The union was firmest between the external condyle and the head of the radius, where in addition to the osseous tissue connecting the articular surfaces, exostoses from the margin of the radial head surrounding the condyle. The bony adhesion between the head of the radius and the lesser sigmoid cavity was separated with the chisel, the coronoid process was liberated from the trochlea in the same manner, and the bony deposit which filled the olecranon depression was removed with the curette. The exostoses were then cut away from the head of the radius and the head itself was reduced to its normal size with bone cutting forceps. Its connection with the external condyle was then severed and all of the articular surfaces were smoothed off. The flap of fascia was drawn downward and turned into the joint around the inner margin of the olecranon. The proximal portion of the flap covered the trochlea and lined the olecranon depression and the lesser sigmoid cavity, while the distal portion covered the external condyle. The margin of the flap was secured to the capsule of the joint on all sides with interrupted catgut sutures and the olecranon was brought into position, and wired to the ulna with aluminum-bronze wire. The ulna nerve, which had been displaced at the beginning of the operation, in order to protect it from injury, was replaced in its groove. Subsequent events show that the fascial flap was not carried sufficiently high on the anterior surface of the humerus to permit of adequate flexion of the joint. (Note the disposition of the synovial membrane of the elbow joint as seen in Fig. 29 and the axis of rotation as seen in Fig. 30.) To prevent adhesion of the triceps muscle to the lower end of the humerus, the deep portion of the common tendon of the triceps was folded together and sutured longitudinally to form a rope-like mass. The edges of the fascia on the posterior surface of the muscle were drawn together as closely as possible to prevent adhesion of the muscle to the skin.

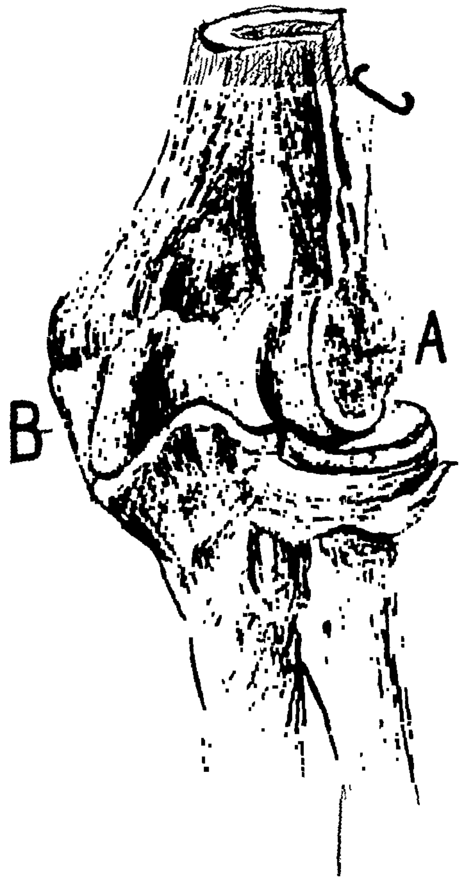

Fig. 30—Axes of rotation in elbow joint.

Passive motions of the elbow were now performed and the muscles were stretched to allow a free flexion and extension. The skin incision was closed with silkworm gut and horsehair, and the wound was drained with a small rubber tube at its lower angle. The elbow was immobilized at a right angle in an external plaster cast.

Result.—A mild degree of superficial infection developed a few days after the operation and caused a slight evening elevation of temperature. It was not necessary to reopen the wound on this account as the retained seropurulent fluid escaped through the sutures. The sutures were removed on the tenth day, and the elbow was put through passive motions every day after this. (Figs. 31 and 32.)

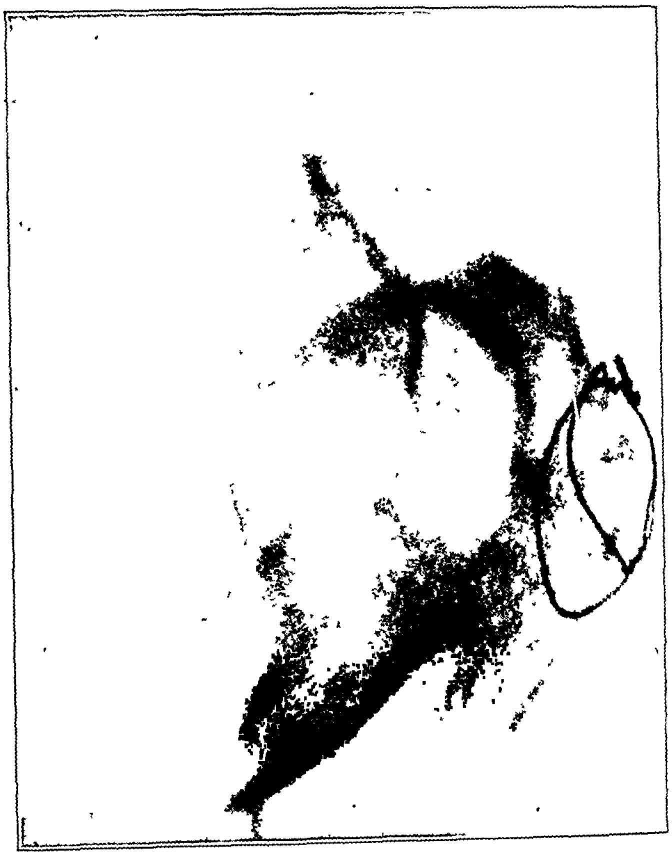

Fig. 31—Case 8: Radiograph of right elbow after operation.

Sept. 17, 1904: He can now pass the hand through an arc of 5 inches. Pronation and supination are about one-half the normal degree. There is no swelling of the joint. The biceps and triceps which had atrophied from non-use are slowly developing.

Case 9.—Mrs. S. S., aged 29; was admitted to Mercy hospital June 21, 1904.

Family history is negative.

Previous History.—"Scarlet fever and measles" when a child. Never pregnant.

Present Illness.—Ten months previously the patient had an attack of "acute rheumatism" which involved in rapid succession the joints of the fingers, left elbow, both knees, ankles and the right wrist. All these joints were swollen, painful and tender to pressure for three weeks, during which time her temperature ranged from 101 degrees to 103 degrees F. The temperature then became remittent, but the arthritis, particularly in the left elbow and the right knee, remained active for 4 months from time of onset. The trouble then gradually subsided leaving all the joints normal, except the left elbow and right knee, which were firmly ankylosed, the former slightly flexed and the latter extended. At present, her general health is good but still has some pain in the knee and elbow.

Examination.—The patient is of small stature; fairly well nourished. The left elbow was firmly ankylosed in a slightly flexed position and permitted of absolutely no motion (Fig. 33). There was no swelling about the joint. The right knee was extended and fixed but allowed of slight passive motion between the femur and tibia. The patella, however, was united to the femur by bony ankylosis.

Operation.—Left elbow was operated on June 22, 1904. Arthroplasty was performed after the method described under Case 8. As the superior radio-ulnar joint was not ankylosed it was not necessary to place the fascia in this situation. Care was taken to cover the entire articular surface of the lower end of the humerus with the fascial flap. The capsule of the joint was not removed. (Fig. 34.)

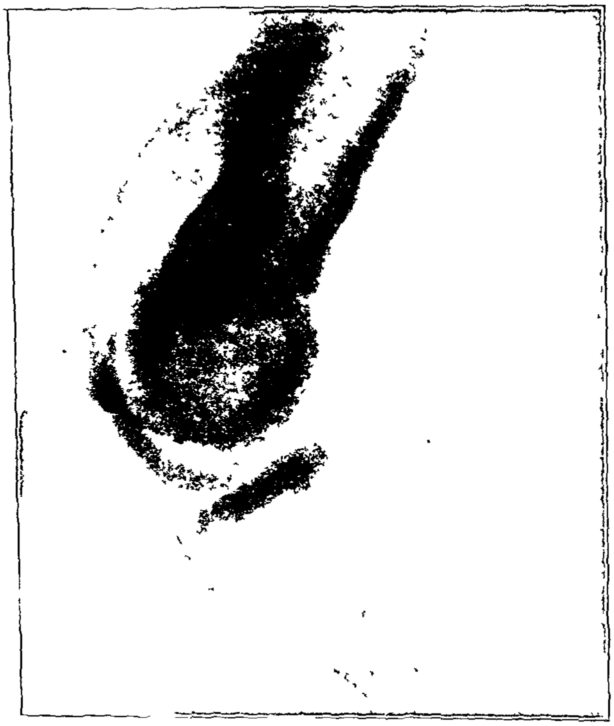

Fig. 32 —Case 8 Normal left elbow joint.

The elbow was put through passive motions to stretch the muscles. the skin incision was closed with horsehair and the elbow was immobilized at a right angle in a posterior plaster cast, which extended from the shoulder to the wrist.

Result.—Wound healed by primary union and the sutures were removed July 2. Passive motions were begun on the fifteenth day and were performed daily thereafter. The cast was removed on the twenty-first day. She left the hospital July 29, 1904. (Figs. 35 and 36.)

Sept. 22, 1904: Active motion carries the hand through an arc of three inches without pain. The elbow can be forcibly flexed to an acute angle and extended to 160 degrees. Supination and pronation are rapidly approaching the normal. There is no swelling or edema about the joint.

Case 10.—Mr. H. B. D., aged 26, lineman; was admitted to Mercy hospital Sept. 14, 1904. Family history is negative.

Previous History.—"Typhoid fever" many years ago. "Rheumatism" 15 years ago. Three attempts have been made under anesthesia to restore motion. and in one attempt the ligamentum patellæ was ruptured. All were unsuccessful.

Present Illness.—Thirteen months previously in the third week of acute gonorrhea, the patient's left knee suddenly became swollen, painful and tender. The pain was very severe and as no improvement followed rest, hot applications, etc., a plaster cast was applied, which immobilized the knee in full extension. He was confined to bed 3 months and the cast remained on 4 months. When it was taken off the knee was stiff and attempts at active or passive motion were very painful. The stiffness and pain have persisted up to the present time and he is incapacitated.. All treatment has been without effect.

Examination.—The left knee was flexed at an angle of about 5 degrees. It was slightly swollen and tender to pressure around the line of the joint. The patella was firmly ankylosed to the femur and could not be moved independently. The ankylosis between the femur and the tibia was apparently fibrous, as a very slight degree of motion was present.

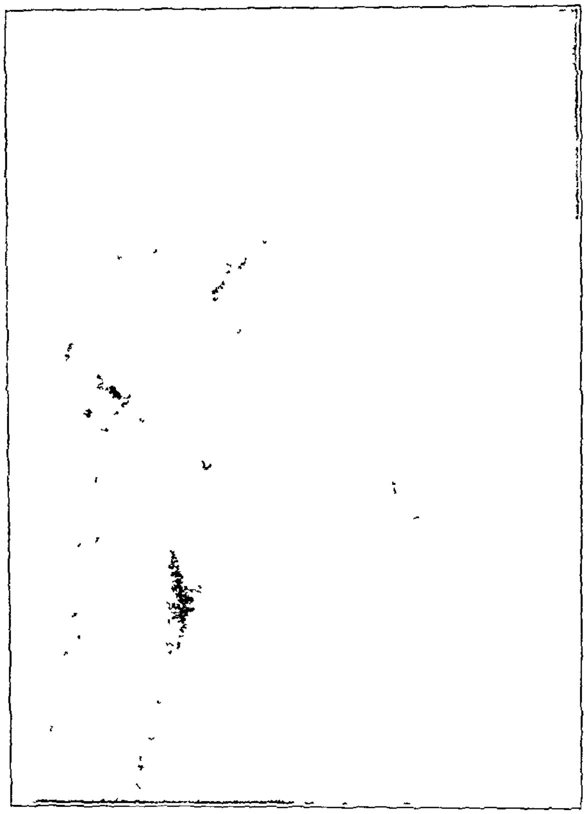

Fig 33 —Case 9 Radiograph of left elbow before operation. Osseous tissue fills the joint and unites the bones.

Operation.—Sept. 17, 1904, Esmarch's constrictor was placed around the middle of the thigh. A transverse incision was made extending from the inner to the outer condyle across the center to the left patella. The patella was sawn through transversely, its lateral ligaments were divided and the bony union to the femur was separated with chisel and mallet. The two fragments were then retracted upward and downward respectively, exposing the interior of the joint. Dense fibrous tissue united the femur and tibia over the entire articular surface and the capsule of the joint was greatly thickened. The capsule was divided in a posterior direction on each side, and the bones were freed from each other by forcibly flexing the leg on the thigh. The anterior crucial ligament was ruptured when the leg was flexed, but the posterior ligament remained intact. A flap of the fascia lata and adipose tissue covering the vastus externus, was then dissected from the muscle leaving a broad pedicle attached just about the joint level. Before turning the flap into the joint the entire capsule, lateral ligaments and periarticular tissue were removed (except from the posterior margin) down to the attachment to the bone. The flap was then turned in between the bones and the entire articular surface of the femur was covered by it. It was large enough to overlap the articular surface and to permit its free border to come well up on the shaft of the bone, where it was secured to the periosteum with interrupted catgut sutures (Fig. 37).

The leg was then extended and the upper and lower halves of the patella were united by a mattress suture of heavy aluminum wire in the bone, reinforced by interrupted kangaroo tendon sutures in the periosteum and patellar aponeurosis. The skin incision was closed with silkworm gut and horsehair. Tubular drainage was used. An anterior plaster cast immobilized the knee in full extension. A Buck's extension was applied on the tenth day and slight passive motion was instituted (Figs. 38 and 39).

Result.—Dec. 1, 1904. Patient is able to walk without cane or crutch, though he uses a cane if on his feet for a long time. Motion in the knee joint is perfectly free to the extent of 15 degrees and this is increasing daily. The patella is freely movable.

Case 11.—Mr. A. W. D., aged 29 years, conductor; was admitted to Mercy hospital Oct. 27, 1904. Family history is negative.

Previous History.—He had acute appendicitis terminating in localized abscess 3 months ago; the abscess was opened and drained.

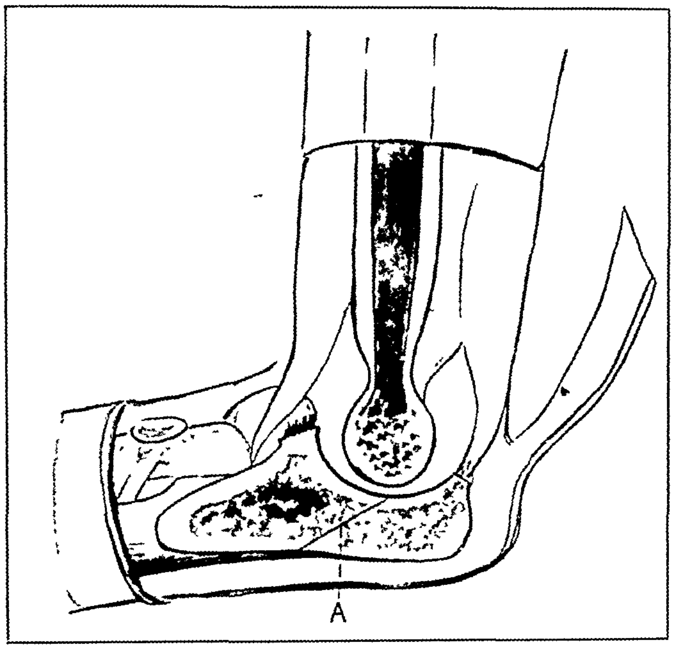

Fig. 34.—Sagittal section through elbow joint. Olecranon is detached from ulna through oblique line. (A) Fascial flap shown with pedicle below.

Present Illness.—Fourteen months ago the patient fell under a moving freight car and was rolled a distance of ten or twelve feet. The wheels did not pass over him, but he sustained the following injuries: (a) Severe contusion and laceration of the soft tissues about the right knee, especially on the outer aspect. The knee joint was opened, but no bones were fractured. (b) Radius and ulna were fractured at about the middle. (c) Right shoulder was severely contused. Suppuration developed in the right knee joint and he was confined to the hospital for 8 months. When he left the hospital the suppuration in the right knee had ceased and the wound was healed, but the patella was firmly fixed to the femur by bony union, the tibia was subluxated posteriorly, and he was unable completely to extend the leg on the thigh. Flexion in the knee was limited to 10° or 15°, and he could not support the weight of his body on the right limb. Owing to the malposition of the leg and foot during the time he was confined in bed, he had a pronounced drop foot which added to the difficulty in walking and standing. Eleven months after the accident the adhesions in the right knee joint were broken up by forcible manipulations. Since then there has been a little more motion in the knee, but he is still obliged to use crutches in walking.

Examination.—There is a scar above right Poupart's ligament where appendiceal abscess was drained. The right radius and ulna were fractured in middle third and fragments were united by fibrous tissue. Right leg was flexed on the thigh at an angle of 140°, and could not be extended beyond this angle. He could flex the knee through an arc of about 20°. The muscles of the right thigh and leg were weakened from disuse. The tibia was subluxated posteriorly and the hamstring muscles permanently shortened. The patella was fixed to the femur by bony union and permitted of absolutely no motion. Marked foot drop existed, the contracted posterior muscles preventing flexion of the foot to a right angle.

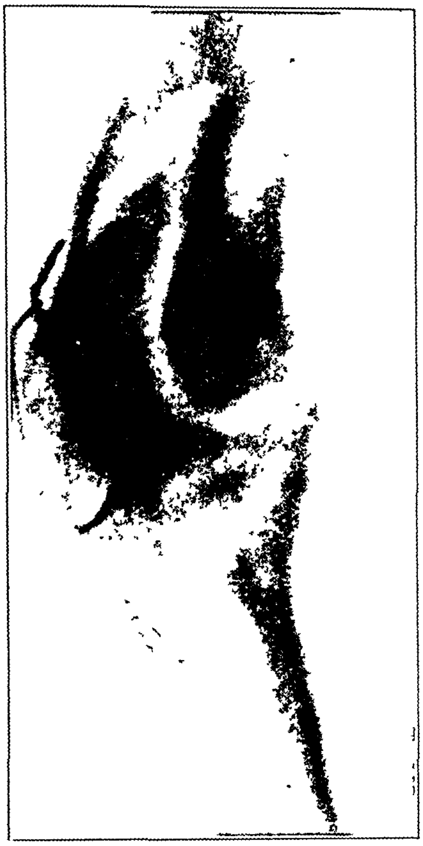

Fig. 35.—Case 9: Radiograph of left elbow after operation, showing distinct line of separation between humerus and ulna.

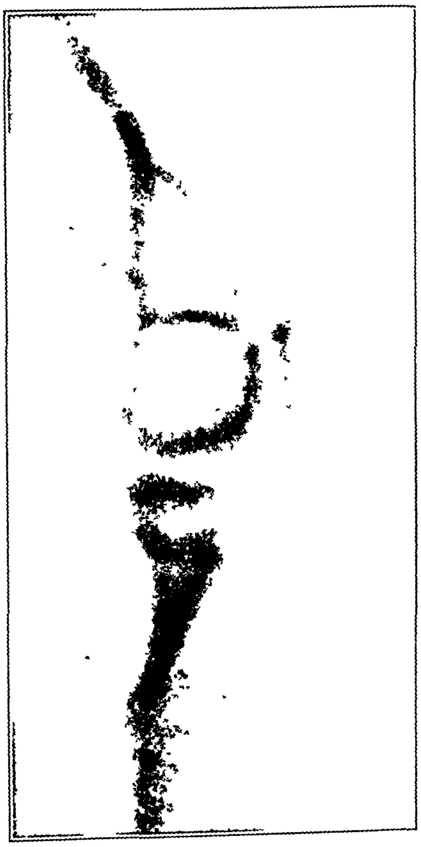

Fig. 36.—Case 9: Radiograph of normal right elbow. The line of separation between humerus and ulna is no more distinct than in Fig. 28.

Operation.—Oct. 29, 1904: Dr. J. M. Neff. The inner and outer hamstring tendons were elongated by tendinoplasty; a U-shaped incision was made around the patella, as in Case 1; the ligamentum patellæ were divided transversely and the joint was opened on each side. The capsule on each side of the patella was incised and removed, after which the leg could be flexed to a right angle without difficulty. There was bony union of the patella and femur. The capsule of the joint was thickened and the synovial membrane was hypertrophied: the tibia was subluxated posteriorly: the synovial membrane and articular cartilages of the knee joint proper were normal, except anteriorly, where the capsule was adherent. The patella was chiseled free from the femur through the line of union between the two bones, and the roughened surfaces were smoothed with bone-cutting forceps: the patella was then retracted upward. A horse-hoe-shaped flap, with its pedicle attached just above the knee joint, was cut from the fascia lata, which covered the vastus externus, and a similar but smaller flap was cut from the fascia covering the vastus internus. The outer and inner flaps were then turned in between the patella and femur to cover the articular surfaces, and the upper edges of the flaps were sutured to the periosteum on the anterior surface of the femur. The opposing edges were sutured together in the median line and the lower edges were sutured to the crucial ligaments. Kangaroo tendon was used. The patella was then brought down to its normal position and secured to the ligamentum patellæ with heavy kangaroo tendon. These were reinforced by sutures approximating the patella aponeurosis: no drainage was used. The patient was returned to bed and the limb was placed in a box.

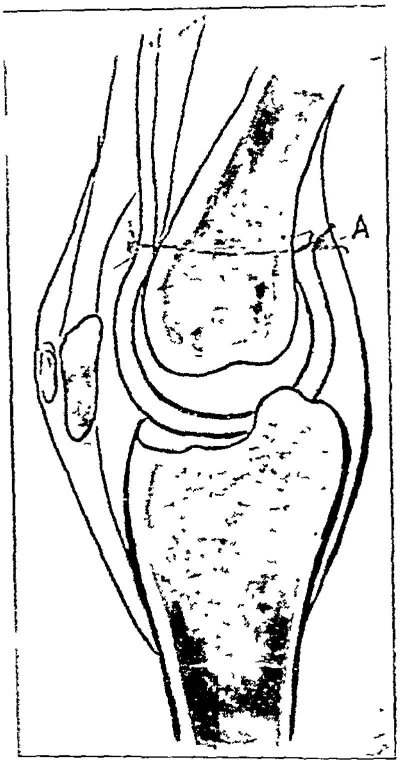

Fig. 37.—Case 10. Sagittal section through knee joint, showing entire articular surface of femur covered by fascial flap, which is sutured to periosteum at A.

Result.—The next morning, October 30, he complained of severe pain and tenderness in the right lower quadrant of the abdomen, and at 4 p. m. his temperature registered 102.6 F. and his pulse was 136. The diagnosis of recurrent acute appendicitis was made, but operation was deemed inadvisable under the circumstances. The pain and tenderness in the right iliac region subsided gradually and temperature became normal November 12. On November 2 the right lower limb was placed in a straight fracture box and Buck's extension of 10 pounds was applied to the leg. The wound healed by primary union and the sutures were removed November 12. Continuous extension was used until December 2, when the patient was allowed out of bed for the first time. The posterior subluxation of the tibia, which was so pronounced before the operation, gradually lessened under the traction and was almost entirely reduced when the extension was discontinued. Passive motions of the patella and the knee with massage were given daily after the first week. December 10 the patient was able to bear his entire weight on the limb, but used crutches in walking. The posterior subluxation was almost entirely reduced and the leg could be extended within 5° of the normal. Motion in the knee joint was perfectly free, though somewhat limited, as a result of the prolonged traction and non use. The patella is free from the femur and allows of a considerable degree of lateral passive motion (Fig. 40).

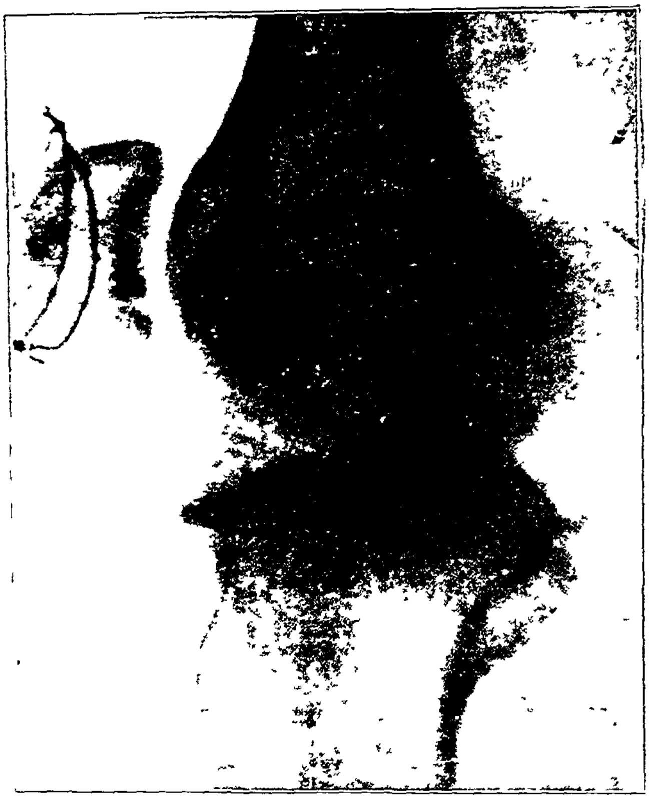

Fig. 38.—Case 10: Radiograph of left knee two months after operation. Line of separation between patella and femur is distinct.

CASE 12.—Miss M., aged 29, was admitted to Mercy Hospital Jan. 3, 1905. Complete ankylosis of elbow joint following a compound fracture, with infection. The ankylosis was complete since 1893. There was pronounced atrophy of biceps and triceps: also of pronators and supinators. The details of operation were the same as those of previous operations for elbow ankylosis, except that the lower end of the humerus was reduced in size and the interarticular flap carried with it more of the fatty tissue. There was primary union, and ten days later passive motion was instituted (Figs. 41 and 42), four-fifths normal motion. There is not the slightest pain or discomfort in putting through this degree of motion, and the muscles of the arm have rapidly developed. Pronation and supination are limited. This is not a flail joint, but a typical anatomic complete joint.

Dr. Wm. Dow, Regina, Canada, in a communication dated Feb. 26, 1904, writes as follows concerning a case on which he operated after my plan on Jan. 2, 1904. (The case was one of double-hip ankylosis from tuberculosis.) "I may not have made plain my use of the fascia in description of my operation, ankylosis from tuberculosis of the hip. I stripped down the fascia from the skin and fascia flap in the manner I saw you do, cutting some fibers of gluteus maximus muscle to place it round the head (end of neck, as head was gone from necrosis), and stitched it to original capsule around neck of bone on as much of neck as contained original capsule, thus surrounding the end of the bone with the fascia lata. The end of bone was smoothed with bone forceps, and the fascia when brought down was made to surround it and was stitched as described, only at upper part of neck I had no original capsule and stitched part to tissues to help hold it down in place. The end of bone was encapsulated with the fascia, and I think it will be all right. There is still a very slight serous discharge, but there is considerable degree of motion at hip and the thigh is filling out. It is now much larger than the opposite thigh. His pulse has slowed some lately. Temperature remains normal. I think I will remove the extension entirely in a few days and will try him on his feet in a week if serous oozing ceases. Will send report of his condition at a later date."

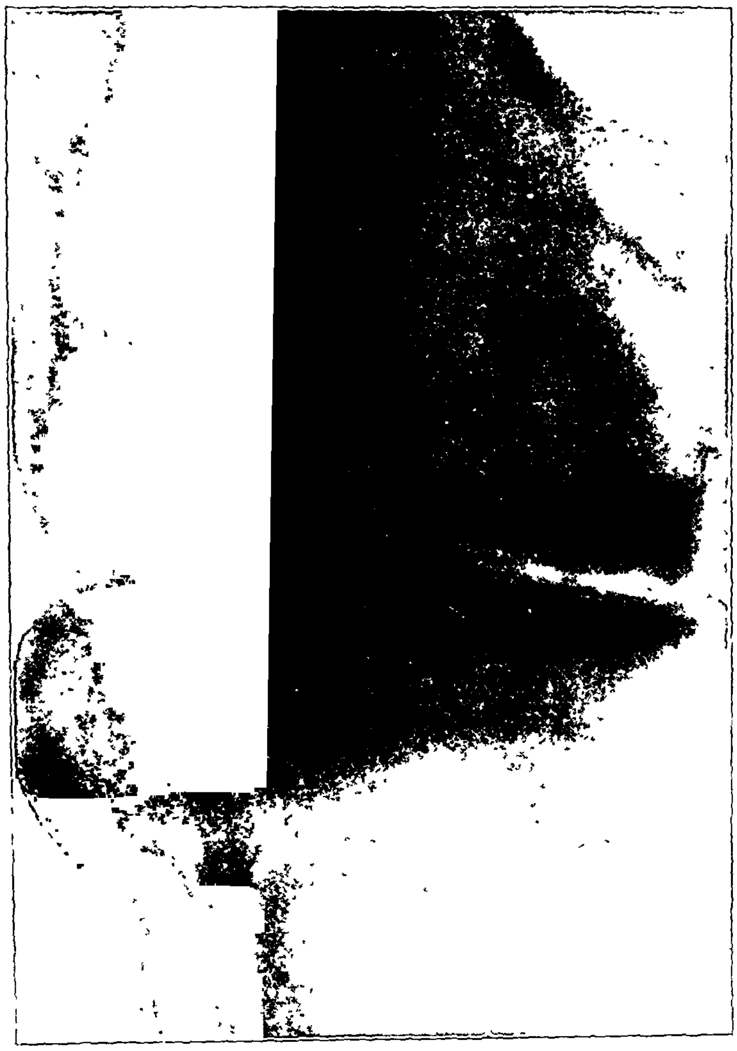

Fig. 39.—Case 10: Radiograph of left knee two months after operation; anterior view. Joint cavity is free and articular surfaces of perfect conformation.

Report of case Dec. 20, 1904: The motion in hip is very good; he can take a very fair step now and can raise the leg up about a foot when standing and can place it over the knee of opposite leg when seated. He uses a crutch and cane when out of doors, but can walk a little in room with one cane alone. There is no pain in that hip or leg. There is 1½-inch shortening, but it was that much shorter than its fellow before operation.

The history of the formation of new joints begins with J. Rhea Barton,[15] of Philadelphia. To him belongs the honor of the first attempt (in 1826) to rectify an angular, true ankylosis of the hip joint by osteotomy. Briefly, his operation consists in incision of skin and muscles and division of bone through the great trochanter and a part of the neck of the femur; then preventing bony union by movements, which will induce ligamentous attachment only.

Dr. J. Kearney Rodgers, of New York, modified his operation in 1830 by removing a disc of bone from between the trochanters.

In 1838 A. Bérard,[16] writing on ankylosis of the temporomaxillary joint, advised the method of Rhea Barton—section of condyles and prevention of bony union by means of motion, in order to form a false and new joint.

John Murray Carnochan, of New York, claims to have performed, in 1840, for the first time, an operation in order to establish a new joint, formation of a "maxillary pseudarthrosis." In operating on a case with ankylosis of the temporomaxillary joint he fractured accidentally the maxillary, which suggested to him later the advantage of dividing the maxillary in order to create a pseudarthrosis of the maxillary joint. In this case he tried to prevent bony union by interposing a piece of wood between the cut bony surfaces. He also advised the patient to chew. The technic followed by Carnochan consisted of division of the temporal and masseter tendons, section of the ramus, and prevention of bony union by interposing cotton. (The bone should be divided through the mouth).

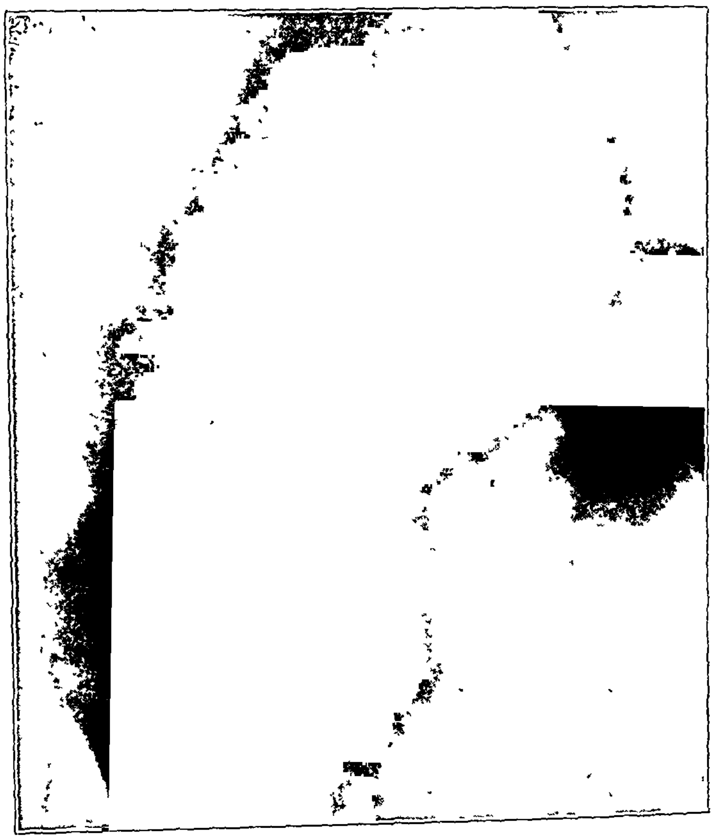

Fig. 40.—Case 11: Radiograph of right knee five weeks after operation. Patella is perfectly free and posterior subluxation is almost entirely reduced.

In his "Lectures on Surgical Anatomy and Operative Surgery" he showed that in some cases of ankylosis of the temporomaxillary joint subcutaneous tenotomy of the masseter and temporal is practicable and rational.

Dieffenbach,[17] in his operative surgery, mentions the treatment of ankylosis of the temporomaxillary joint by "section of bones." On page 774 of the same work he advises section of the masseter and formation of a new joint in cases of ankylosis of the temporomaxillary joint.

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[15] North: Amer. Med. and Surg. J., 1827, p. 290.

[16] Bérard, A.: Dict. de Med. en 30 vols, xviii, p. 440, 1838.

[17] Dieffenbach: Operative Surgery.

Esmarch is one of the surgeons who also recommends the creation of a pseudarthrosis in ankylosis of the temporomaxillary joint. He advises surgical intervention only in cases where the immobility is due to cicatricial tissue; in other words, he does not operate on joints with any structural changes.

In his thesis Charles Richet[18] advises the following technic in cases of ankylosis: Longitudinal incision of periosteum, which is denuded and preserved "in order to form the new articular capsule." He then divides the bones and advises the patient to chew, so as to prevent bony union.

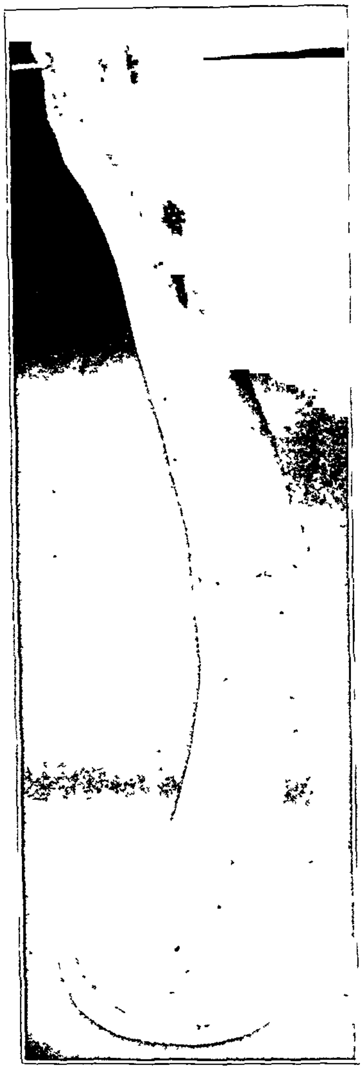

Fig. 41.—Case 12: Shows degree of voluntary extension.

Rizzoli and A. Verneuil[19] restored motion—the former in three cases, the latter in one of temporomaxillary ankylosis—by section of both extremities and prevention of union by movements. The result was a pseudarthrosis.

FORMATION OF NEW JOINTS BY MUSCULAR INTERPOSITION.

Recently the ankylosis of joints has been corrected by osteotomy, followed by muscular interposition. Nélaton[19] reports two cases overcome by this method. The first case was one with double ankylosis of hip joint, following articular rheumatism. The patient was unable to walk or to stand up. An operation was performed as follows: Antero-external incision of skin, section of muscles and capsule; extrusion of the head of femur; enlargement of cotyloid cavity. Next Nélaton interposed between the head and acetabulum a strip of fascia lata, 2 fingers in width and 5 inches long. Then suture of muscles with catgut and of skin with horsehair. The corresponding leg was extended by weights of from 10 to 12 pounds. Union was obtained in 15 days, and two months later the patient was able to walk. On examining the patient two years later Nélaton found all the movements free and painless, though the patient walked more or less like an individual with congenital dislocation of the hip.

The second case was that of a young man, 29 years old, who had suffered from acute and generalized rheumatism, followed by ankylosis of both hip joints and of the lumbar spine. The thighs were flexed on the pelvis (50°) in slight abduction, and the knees were separated by a distance of 8 inches. An incision one inch in length was made on the antero-external margin of the great trochanter; the muscles and capsule were incised; the neck and head of femur were extruded; the old cotyloid cavity was enlarged by scissors; a piece of fascia lata of from 14 to 15 inches was interposed between the head of the bone and the cavity. Healing was obtained in three weeks. The movements of the new joint were very good, but, on account of the pressure exerted by the traction apparatus, the patient developed an eschar at the head of the fibula, followed by paralysis

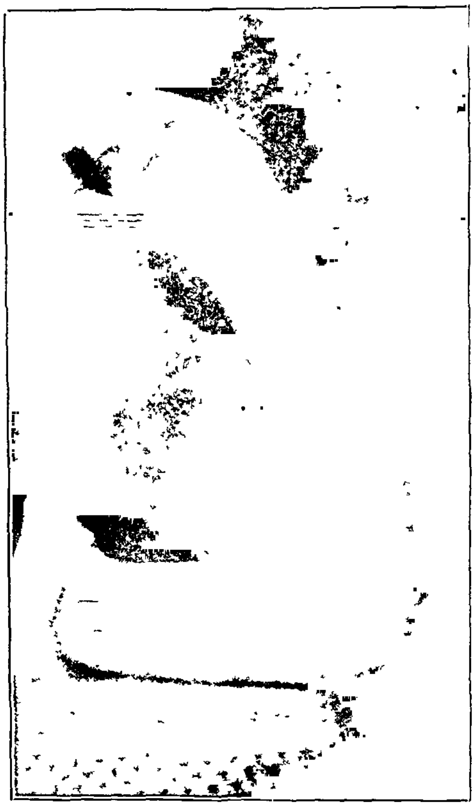

Fig. 42.—Case 12: Shows degree of voluntary flexion.

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[18] Richet: Thèse de Concours: Des Operations applicables aux Ankylosis

[19] Nélaton: Bull. et Mem. de la Soc. de Chirurgie, 1902, p. 687.

of the external popliteal nerve, which, of course, made extension of the foot impossible. Nélation says in his report: "I believe muscular interposition is the strongest medium that we possess in order to combat bony ankylosis of a joint."

A case of ankylosis of the shoulder joint was treated by muscular interposition by M. Coville (case reported by Nélaton). A young woman, 22 years old, had absolute ankylosis of the shoulder joint, following trauma. On May 19, 1903, Coville made a 4-inch incision, starting below the clavicle and passing externally to the coracoid process; then down the arm, following the fibers of the deltoid. The muscle was incised outside of the groove separating it from the pectoralis. The head of the humerus was extruded and divided at the level of the anatomic neck. The long strip of the deltoid was cut transversely, the superior part being left adherent. A piece of 4 inches, obtained by the transverse section, was interposed between the surface of the humerus and glenoid cavity. Coville perforated the capsule with a probe so as to prevent wounding the musculo-spiral nerve. A counter incision was made at the same level and a thread passed through this opening, surrounding, in the form of a loop, the extremity of the muscular strip, and by tightening it applies the muscle in the articular cavity. Three days later movements of the new joint were performed.

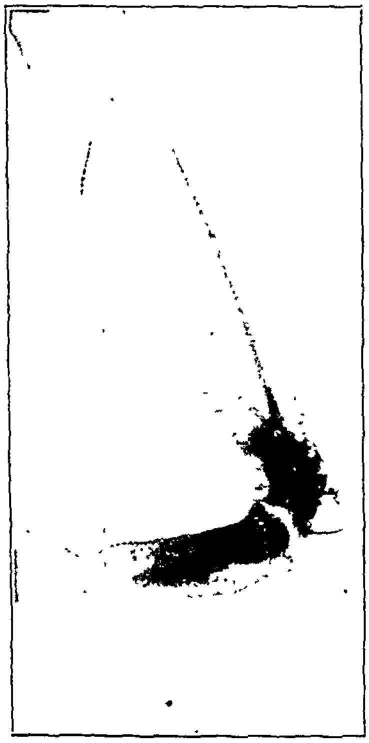
Fig. 43.

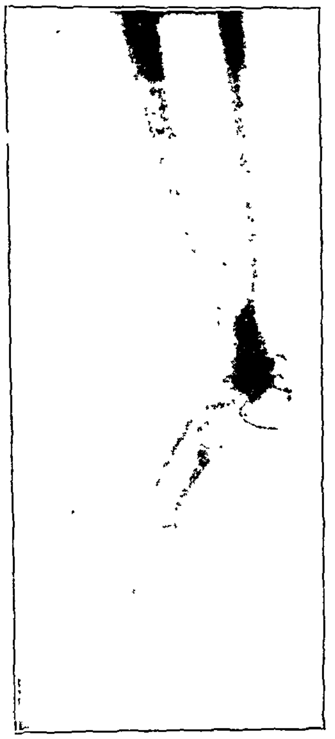
Fig. 44.

Fig. 43.—Case 12: Radiograph shows position of bones in voluntary flexion. It will be noted that the tip of the olecranon still hugs the humerus, although three-quarters of an inch lower than in the extended position. Radiograph was made three and a half months after operation.

Fig. 44.—Case 12: Radiograph shows position of bones in voluntary extension. The bones slide on each other in the normal way. The bronze wires are still in place. Radiograph was made three and a half months after operation.

The result was good; the woman was able to sew (she was a tailoress), but abduction was limited.

Berger[20] reports the following case: The patient suffered from ankylosis of the elbow joint of several years' standing, for which amputation had been advised. Three cm. were resected from the humerus and 2 cm. from the ulna. A piece of the olecranon, covered with periosteum, was left in order to preserve the insertion of the triceps. The extremity of the humerus was carefully rounded, so as to imitate the normal form. In order to assure mobility of the new joint and to prevent return of the ankylosis, Berger placed between the bony extremities a piece of muscle taken from the pronator radii teres, which was fixed by several sutures to the brachialis anticus. He attributes the good result which he obtained to the muscular interposition.

In addition to attempts to overcome the ankylosis, some authors have tried to correct the defect by interposing soft tissues between the bony surfaces.

Föderl, for example, experimenting on animals, found that he could restore the motion in the temporomaxillary joint, ankylosed after resection, by interposing between the bones, animal membranes, such as pieces of bladder or the wall of ovarian cysts.

Chlumsky[11] restored motion in ankylosis, following experimental resection in animals, by first covering the bony extremities with collodion and then interposing between them plates of celluloid, silver, tin, rubber, etc. The animals were able to move their joints just as well as before the operation. Later he used plates of magnesium.

Some surgeons advise another operation for ankylosis. T. Wolff reported 9 cases of ankylosis in 1895 and 1897 in the *Berliner Chirurgen Vereinigung.* He made use of "arthrolysis:" section, chisel and excision of all the fibrous tissue which hindered movement. The operations were followed by good results.

Eiselsberg reports good results in only one of the two joints in which he used the same method. Kocher, while in favor of arthrolysis, modifies it by putting the bony extremities, after the arthrolysis, in a position of dislocation, which he reduces 8 to 14 days later.

Quénu (Société de Chirurgie, Paris, June 25, 1902) reported a case of ankylosis of the elbow joint treated by interposition of soft tissues after an extensive resection of the bony extremities. He first largely resected the ends of the ulna, the radius and the humerus and then interposed the anterior ligament of the elbow. The result was very satisfactory.

Delbet also praises the method of "muscular interposition" in cases of ankylosis.

In our work we have been able, by the interposition of fascia and muscle, covered with a layer of adipose tissue, to produce normal movable joints, with capsules and collagen intra-articular fluid. This, we believe, is the first systematic production of new and practically normal articulations.

The Lewis and Clark Centennial Exposition.—The beauty of the site and the superb view to be had from it are far beyond an adequate description. They must be seen to be thoroughly appreciated. Nestling at the base of the foothills of the Cascade Range, on the gentle slopes and terraces overlooking Guild's Lake and the Willamette River, with an unobstructed view of 65 miles which embraces the snowcapped peaks of Mount Hood and Mount St. Helens, the site presents a picture entirely original in exposition building. One may sit on a commanding roof garden and while dining drink in the pictorial sublimeness of real snow peaks of mountains that rival the Alps in grandeur. Of the gross area of the site, 180 acres are on the mainland and 60 acres form a peninsula extending out into Guild's Lake, a fresh water body 220 acres in extent, which is separated from the Willamette River by a narrow strip of land.—*Medical Examiner and Practitioner.*

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[20] Berger: Bull. et Mem. de la Soc. de Chir., 1903, vol. xxix.

ABSENCE OF ARTICULATE SPEECH.

CLASSIFICATION OF ONE HUNDRED CASES NOT DUE TO MECHANICAL FAULTS OR DEAFNESS.

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POLK, PA.

The anxiety often expressed by parents in regard to a child's inability to talk, the number of such cases requiring special care, training and treatment, and the relation of the absence of articulate speech to the child's future development and usefulness, have prompted me to present a classification of cases in which there is absence of articulate speech not due to mechanical faults or deafness, with a few remarks on the most interesting conditions found. The patients are inmates of the State Institution for Feeble-Minded of Western Pennsylvania.

Fig. 1.—Paralytic.

	M.	F.	Total.
Epileptic	10	11	21
Epileptic with cerebral paralysis	8	12	20
Paralytic	6	8	14
Cretin	..	1	1
Genetous idiocy	15	14	29
Microcephalic	5	6	11
Hydrocephalic	1	1	2
Mongolian	1	1	2
	46	54	100

To express ideas in language we must understand the meaning of words and the formation of ideas, and we must have a co-ordinate action of the muscles concerned in speech. In these cases of aphasia one or more of these conditions are absent, with the general absence of the power of verbal expression, depending on cerebral lesions or on the lack of mental development.

The cerebral lesions found in diseases affecting the centers of speech have led many to believe "that in the majority of persons the parts presiding over the faculty of speech are situated at the left side, at or near the third frontal convolution and the island of Reil, parts receiving their blood supply from the middle cerebral artery."

In six cases aphasia was due to lack of memory and ideas, and was apparently caused by frequent and severe epileptic convulsions.

We will first consider aphasia in the epileptic. Most of the cases included are of the grand mal type, having frequent and severe convulsions, with a marked tendency to become more severe as the case progresses. Six boys and eight girls, in addition to epilepsy, have some form of cerebral paralysis (Fig. 1). These cases are mostly congenital and due to faulty intrauterine development or to injury at birth. In 15 cases the convulsions began during the first year and in all before the age of 6. Epilepsy was given in the family history of 3 cases. In the majority of the cases, I do not consider epilepsy to be the direct cause of the aphasia, but that both are expressions of a defective development, and their presence should lead us to make a thorough examination of the organs of speech to eliminate mechanical faults. An *unfavorable prognosis* should be given as these cases do not respond to treatment or improve under instruction.

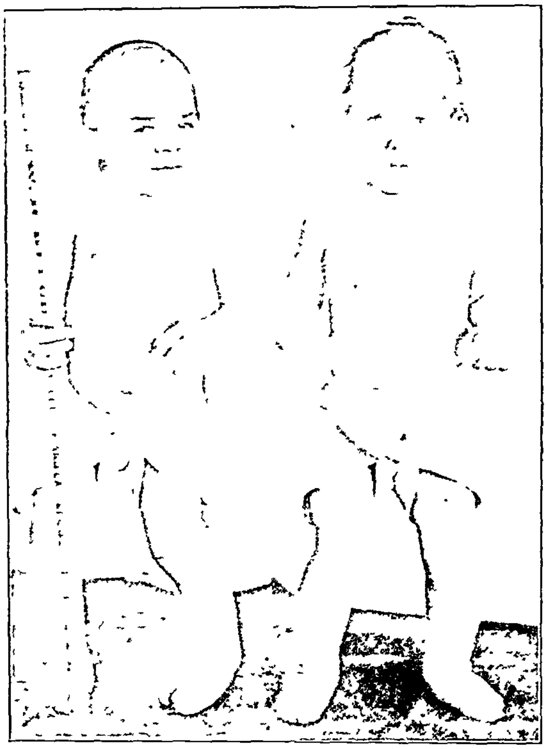

Fig. 2.—Cretins.

PARALYSIS.

In 20 cases cerebral paralysis was the cause of the aphasia, two being marked cases of hemiplegia with inability to co-ordinate the muscles concerned in articulate language. It is of interest to note here the etiology of hemiplegia, "which is considered to be an injury mostly by hemorrhage to the motor region of one side, mainly in that area supplied by the middle cerebral artery."

In cases of aphasia where but one side of the brain is involved, as in hemiplegia, favorable results have followed a systematic training to develop the center of speech on the opposite side of the brain, which has become functionless from lack of use. This treatment should be tried in all cases presenting a possibility of improvement.

There are 6 cases of diplegia and 8 cases of paraplegia and in all the lesions date from birth, none of these ever having been able to speak.

CRETINS.

Absence of or defective speech is so marked in the cretin that this type is often classified from this condition alone. In the cases shown in Figure 2, the one is deprived entirely of language and belongs to the lowest grade of this type; the other can use but a few words.

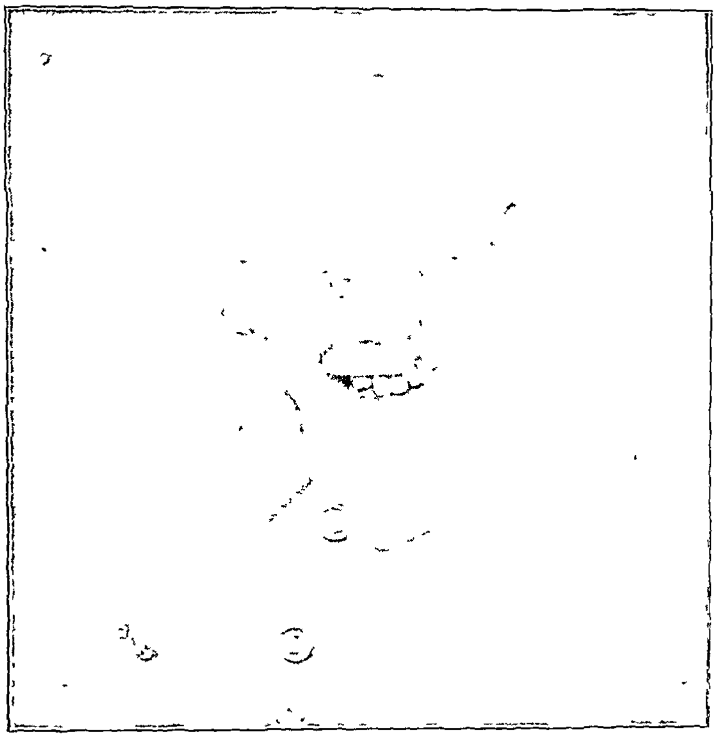

Fig. 3.—Microcephalic.

Fig. 4.—Mongolian.

Cases of genetous idiocy present little of special interest. The lack of articulate speech is only a symptom of their low mental capacity.

MICROCEPHALUS.

The head circumference of all microcephalics included in this table is less than 17 inches, and aphasia is simply due to apraxia (Fig. 3).

HYDROCEPHALUS.

The hydrocephalic type is well illustrated by the following case:

Patient.—E. D., aged 8, had never been able to talk or to walk. The bodily development was slow and at the age of five months excessive development or enlargement of the head was observed. Slow mentation was also noticed early. He was the youngest of seven children; one brother died in infancy, the remaining brothers and sisters are healthy, intelligent and without deformity. No hereditary predisposition to mental or nervous trouble could be ascertained.

Present Condition.—There is marked enlargement of the head, circumference 26 in., antero-posterior diameter 9, transverse diameter 7. The body and limbs are undersized and poorly developed; there is slight anesthesia confined to the lower extremities, which show marked paralysis with rigidity and contractures.

In this case it seems fair to assume that the aphasia was due to the intraventricular pressure, which has injured the cortical areas in each hemisphere.

Clinical Reports

A CASE OF PARALYSIS OF THE RECURRENT LARYNGEAL NERVE,

FROM ANEURISM OF THE ARCH OF THE AORTA.*

HILL HASTINGS, M.D.
LOS ANGELES, CAL.

This case is reported in the interest of laryngology, because of the strong and positive light thrown on the diagnosis by an examination of the larynx. This led to the search for the physical signs of an aneurism of the aorta, which had been overlooked and which might not have been discovered for some time. The history of the case rather inclined toward tuberculosis of the lungs, with secondary laryngeal involvement. It was due to the latter complication that the case was referred for laryngeal examination and treatment. The radiograph of the chest was made to aid in confirming the diagnosis.

Patient.—P. H., 43 years of age, was referred to me two months ago on account of hoarseness. His appearance and voice indicated tuberculosis of the lungs and larynx. The history given at the time was as follows:

History.—Hoarseness was first noticed five or six weeks ago and has gradually grown worse. He had not caught cold, never had had any cough, never spat any blood or any sputum. He has had some shortness of breath; has been a little feverish of nights, and unable to sleep, chiefly on account of the pain in the chest. This pain is referred to the upper sternal region and left shoulder, and later was described as of a severe griping character, frequently running down the arm. Appetite is poor; no nausea or vomiting; some pain on swallowing; has lost 20 pounds in weight in the past six months. Occupation, waiter; has worked steadily until a few weeks ago. The previous history is negative. Denies syphilis; admits gonorrhea, mild attack when a young man. His habits are good. He is married and has two children.

Examination.—Larynx: Slight congestion of the mucous membrane, but no infiltration, nor ulceration, nor any signs of inflammation. There is complete paralysis of the left vocal cord, which remains in the position of cadaveric rigidity during phonation and respiration. The right cord moves freely, and during phonation extends beyond the mid-line to meet the paralyzed one. No tumor of the larynx or neck is apparent.

Chest: The apex beat is displaced outward, in the fifth interspace 1 cm. outside of the nipple line in the upright position, and 1 cm. within the nipple line, when the patient is reclining. Pulsation in the right second intercostal space, close to the sternum, is distinctly seen when the chest is in the proper light. This pulsation is synchronous with the apex beat. No thrill is felt on palpation. Dullness in the second intercostal spaces, both right and left, is found to the extent of two or three cm. on each side of the sternum. Auscultation is negative, except for markedly accentuated second sound at the aortic interspace. No cardiac murmurs and no bruit are heard. The lungs were found to be apparently normal. Tracheal tugging is believed to be present, though it is not marked. The veins of the infraclavicular regions are very slightly enlarged. There is marked difference between the pulsation in the carotid artery, that of the right side being strong and full, while that of the left is weak and small. The difference is perceptible on inspection, as well as on palpation. There is no apparent difference in the radial pulse of the two sides. The pupils are equal.

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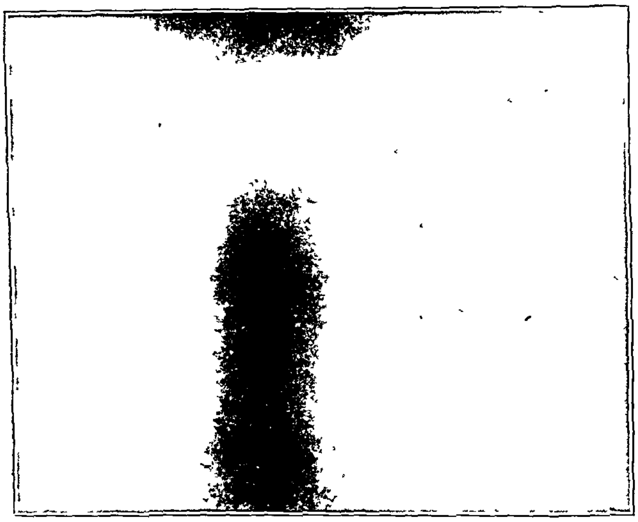
* Presented before the Los Angeles County Medical Society.

Diagnosis.—A diagnosis was made of aneurism of the arch of the aorta, pressing on the left recurrent laryngeal nerve.

Skiagraphic Examination.—On the following day an *x*-ray photograph of the chest was made by Dr. A. Soiland. His report is as follows: "The examination with the fluoroscope of the chest of your patient, P. H., shows a shadow about the size of an orange, above the heart and extending on each side of the sternum to an extent of 1½ inches. Pulsation of the shadow is apparent. I am inclined to think that it is an aneurism of the arch of the aorta."

Subsequent History.—The subsequent history has been uneventful, except for some change in the larynx. The hoarseness has increased until he can now speak only in a whisper. The left vocal cord remains in the same position of rigidity, while the excursion of the right cord, during phonation, has decreased so that it does not meet its fellow. The vocal processes of the two cords almost but do not quite meet during phonation, leaving a space in front and behind, the left edge of which (the free margin of the paralyzed cord) is markedly bowed. On inspiration the right arytenoid and corresponding right cord move outward, while on phonation the right ary- interpreted as due to paralysis of the arytenoideus muscle, tenoid is drawn to the opposite one sluggishly. This has been which has developed since the first examination.



Marked vicarious action of the false cords is observed. They meet during phonation to the extent of the anterior two-thirds, completely preventing the view of the true vocal cords to that extent. This is believed to be due to excessive action of the thryo-arytenoideus muscles. The veins over the upper part of the chest have become somewhat more prominent, as has also the pulsation in the second aortic interspace. The griping pain referred to the upper sternal region has remained severe and is controlled only by morphin.

The medical profession must begin to get busy in the treatment of their cases. What the people demand is relief or cure of their ills, the quicker the better, and if one does not do something better for them, they are going off into other lines. Diagnosis is essential, and very essential, but after all the ultimate aim of all medical research is the prevention or cure of disease, which means therapeutics.—*George F. Butler.*

QUININ IN PNEUMONIA.

FRANCIS H. POOLE, M.D.
Agency Physician, United States Indian Service.
ROSS FORK, IDAHO.

In thirteen consecutive cases of pneumonia developing in the course of a recent epidemic of that disease among the Indian school children on this reservation, the patients were treated by large doses of quinin, according to the method advocated by Galbraith,[1] without mortality. Some observations on the effects of the treatment, particularly its tendency to induce nasal and uterine hemorrhage, are given below:

Five cases developed in boys ranging in age from 7 to 13 years, and eight developed in girls between the ages of 9 and 17. The initial symptoms common to all cases were intense frontal headache, epigastric distress and vomiting, while in eight cases epistaxis also occurred during the onset.

Of the five boys, three suffered epistaxis as an initial symptom and all had repeated nasal hemorrhages during the administration of the quinin and iron treatment.

Of the eight girls, five suffered epistaxis during the onset; two of these five, aged respectively 11 and 13 years, in whom the menstrual function was not yet established, began menstruating shortly after treatment was begun, but had no further nasal hemorrhages while under treatment. Of the three others with an initial epistaxis, the hemorrhage recurred repeatedly during the treatment. The remaining three girls in whom epistaxis was not noted as an initial symptom, aged respectively 13, 14 and 17 years, began menstruating during treatment, although in none of these cases were the menses due and all were of known regularity with respect to periodicity.

Was this great tendency to hemorrhage from initial symptoms to crisis a part of the disease, peculiar to this particular epidemic, or were the nasal hemorrhages incident to the onset due to infection and the subsequent ones to the treatment?

Quinin in large doses proved a genuine stimulant to the heart and circulation and appeared, in a large measure, to allay the anxiety and apprehension and to secure sleep.

The lung involvement was as follows:

Right upper lobe	5 cases.
Entire right lung	5 cases.
Lower left lobe	2 cases.
Entire left lung	1 case.

The minimum single dose of quinin given was fifteen grains and the maximum single dose thirty-six grains.

As present-day investigators are united in the belief that the exciting etiologic factor of pneumonia is nearly always present in the circulating blood, if indeed the disease is not regarded as essentially a primary pneumococcic septicemia with a secondary process in the lungs, and acknowledging the antiseptic properties of quinin and iron, is not the line of treatment advocated by Dr. Galbraith a rational one?

IMMEDIATE CLOSURE OF TRACHEOTOMY WOUNDS.

THOMAS C. HOOVER, M.D.
Professor of Surgery, Starling Medical College.
COLUMBUS, OHIO.

The cases reported by Miles F. Porter, M.D., Fort Wayne, Ind., prompt me to report the following:

Baby girl, aged 2½ years, referred to me by Dr. Quin, West Jefferson, Ohio, Feb. 18, 1898.

The evening before the child had been playing with some corn and a grain lodged in the trachea. When she arrived at my office, having been conveyed in an open buggy eighteen miles, she was breathing easily, but she had a paroxysm of dyspnea while I was examining her.

Low tracheotomy was immediately performed and the grain of corn presenting at the tracheal opening was removed without difficulty. I closed the wound throughout with fine catgut, beginning with the trachea. The recovery was prompt and without unfavorable incident. No drain was used.

If surgical cleanliness is used there certainly can not be any good reason for using the open method in non-infectious cases of tracheotomy.

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[1] The Journal, Jan. 28, 1905, p. 291.

ANOMALIES OF THE TEMPORAL BONE.

EMIL AMBERG, M.D.
DETROIT, MICH.

DISPLACEMENT OF THE MASTOID PROCESS BY THE LATERAL SINUS.[1]

One of the most common forms of asymmetry in the human skull consists in the right lateral sinus being situated more anteriorly than the left. Trautmann[2] has made extensive investigations into these conditions, and following his ideas I examined a series of 17 picked temporal bones and described them under the title, "Some Practical Remarks on the Anatomy of the Temporal Bone."[3] Basing my conclusions on the measurements of those 17 temporal bones, in which the distance of the most protruding part of the lateral sinus from the supra-meatal spine varied from 21 mm. (in a right temporal bone) to 6 mm. (also in a right temporal bone), I concluded that a lateral sinus which comes nearer to the supra-meatal spine than 10.6 mm. can be regarded as displaced forward. The distance in the specimen shown in Figures 1 and 2 is 7 mm. This specimen, however, shows a peculiarity which places it in an entirely different class. There is scarcely any mastoid process; its place is taken by the lateral sinus. The mastoid process in the specimen measures 8 mm. in length and about 1 cm. in breadth. The styloid process is situated correspondingly superficially. The meatus appears to be much narrower in the specimen than is usual, a point emphasized by Trautmann. The specimen shows an important condition not only anatomically, but also clinically.

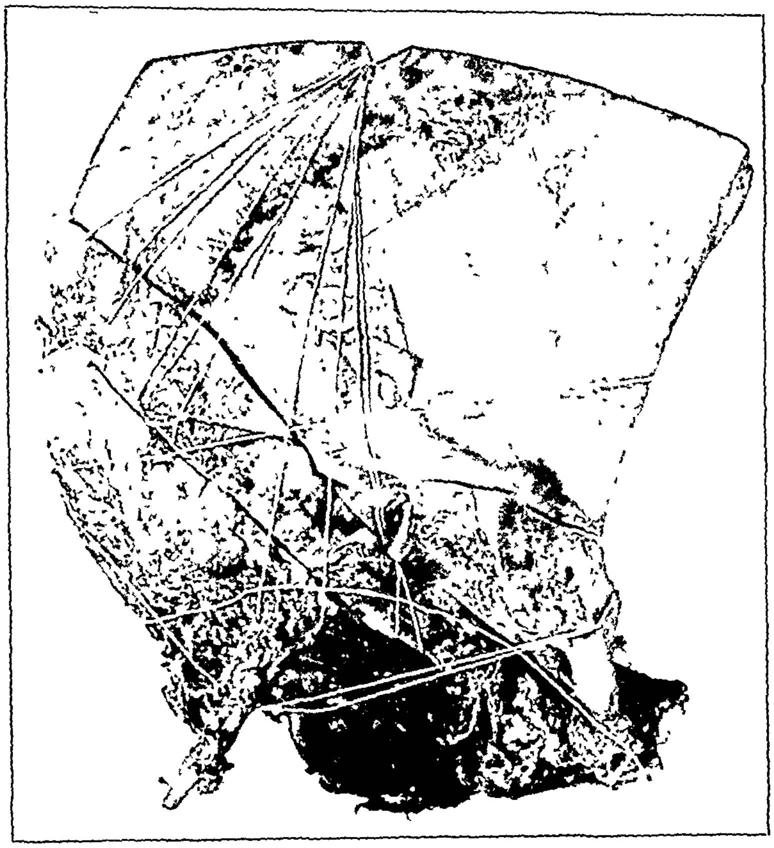

Fig. 1.—Temporal bone, showing short mastoid process and T like lower dissecting lines.

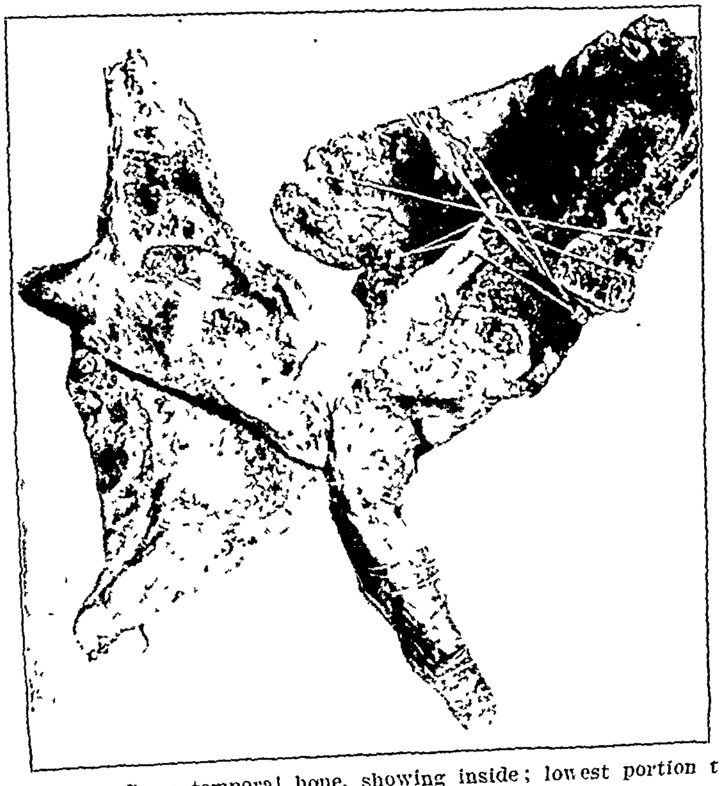

Fig. 2.—Same temporal bone, showing inside; lowest portion to the left

A CRISTA TEMPORALIS INSTEAD OF A LINEA TEMPORALIS.[4]

The linea temporalis, according to Schwartze,[5] extends directly behind the outer ear canal, horizontally, from before backward, as a direct prolongation of the upper edge of the zygomatic process, and divides the mastoid portion of the temporal bone from the squamous portion. In this specimen, instead of a shallow line there is an elevation which extends to the height of 4.5 mm., so that instead of a line there is a crest. The crest does not seem to have been produced by any pathologic changes. I do not remember ever before having seen such a crista temporalis, nor do I recollect having found its occurrence recorded in the literature.

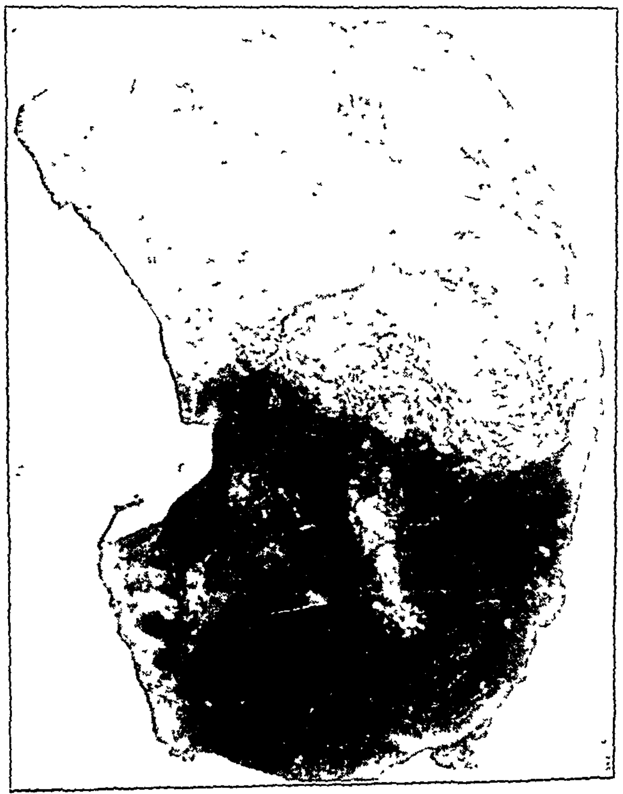

Fig 3.—Temporal bone, showing crista temporalis.

Dr. P. M. Hickey, Detroit Clinical Laboratory, photographed the specimens for me.

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[1] Demonstrated in the Surgical Section of the Wayne County Medical Society, 1904.

[2] Surgical Anatomy of the Temporal Bone, Especially with Reference to the Radical Operation, Berlin, 1898.

[3] The Physician and Surgeon, November, 1899.

[4] Demonstrated before the Wayne County Medical Society, 1904.

[5] Handbook of Otology, Part 2, p. 798.

The medical profession, said the late Austin Flint, senior, will have reached a high ideal position when the physician, guided by his knowledge of diagnosis, the natural history of diseases, and existing therapeutic resources, may, with neither self-distrust nor the distrust of others, treat an acute disease by hygienic measures without potent medication.

THE PORTLAND SESSION

American Medical Association, Fifty-Sixth Annual Session, Portland, Oregon, July 11 to 14, 1905.

OFFICIAL CALL

THE FIFTY-SIXTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, TO BE HELD IN PORTLAND, OREGON, JULY 11-14, 1905.

The next annual session of the American Medical Association will be held at Portland, Ore., on Tuesday, Wednesday, Thursday and Friday, July 11, 12, 13 and 14, 1905. The first general meeting, which constitutes the opening exercises of the scientific functions of the Association, will be held at 10 a. m., Tuesday, July 11.

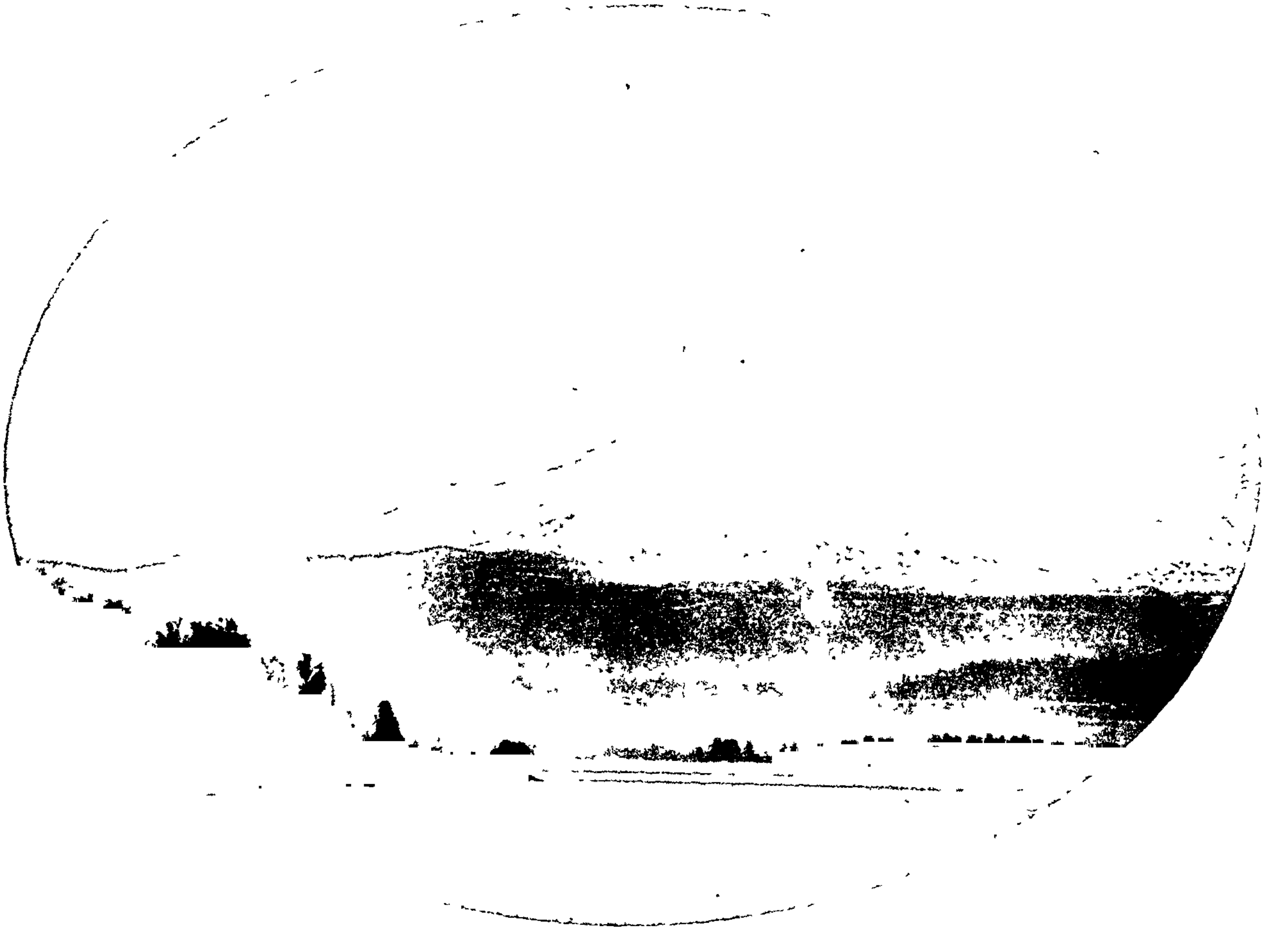

Fig 1—Mt. Hood Another view is given in Fig 12.

The Registration Department will be open from 8 a. m. to 5:30 p. m., on Monday, Tuesday, Wednesday and Thursday, July 10, 11, 12 and 13, and from 9 to 11 a. m. on Friday, July 14.

NEW MEMBERS.

Those who desire to join the Association at Portland must present certificates showing that they are members in good standing in their state association or in one of its component branches.

THE HOUSE OF DELEGATES.

The House of Delegates of the American Medical Association will convene at the Chamber of Commerce Building, Portland, Ore., at 10 a. m., Monday, July 10, 1905.

The following is a list of the constituent associations and the number of delegates to which each is entitled:

State.	Delegates.	State.	Delegates.
Alabama	3	Montana	1
Arizona	1	Nebraska	2
Arkansas	2	Nevada	1
California	4	New Hampshire	1
Colorado	2	New Jersey	3
Connecticut	2	New Mexico	1
Delaware	1	New York	4
Dist of Columbia	1	North Carolina	2
Florida	1	North Dakota	1
Georgia	2	Ohio	5
Hawaii	1	Oklahoma	1
Idaho	1	Oregon	1
Illinois	8	Philippine Islands	1
Indian Territory	1	Pennsylvania	8
Indiana	4	Rhode Island	1
Iowa	4	South Carolina	1
Kansas	2	South Dakota	1
Kentucky	3	Tennessee	3
Louisiana	2	Texas	5
Maine	1	Utah	1
Maryland	2	Vermont	1
Massachusetts	6	Virginia	3
Michigan	[illegible]	Washington	1
Minnesota	2	West Virginia	2
Mississippi	2	Wisconsin	3
Missouri	3	Wyoming	1
U. S Public Health and Marine-Hospital Service	1		
Medical Department, U S Army	1		
Medical Department, U. S. Navy	1		
Each of the scientific sections, one delegate	12		

GEORGE H. SIMMONS,
Secretary.

JOHN H. MUSSER,
President.

THE OFFICIAL PROGRAM.

In order to avoid misunderstandings and to protect the interests of advertisers, attention is called to the fact that there is but one official program. This program is copyrighted by the Board of Trustees and contains no advertising matter. A copy will be presented to each member on registration.

COMMITTEE OF ARRANGEMENTS.

List of the General Staff of Officials Who Look After the Arrangements.

The following is the list of the members of the general Committee of Arrangements. The full list of subcommittees will appear in the official program:

K. A. J. Mackenzie, chairman; H. W. Coe, A. J. Giesy, A. C. Smith, E. F. Tucker. William Jones; George F. Wilson, treasurer; F. Cauthorn, secretary.

Committee on Medical Legislation.—Charles A. L. Reed. Cincinnati, Ohio, chairman, one year; William L. Rodman, Philadelphia, two years, and William H. Welch, Baltimore, three years.

Committee on Transportation and Place of Session.—M. L. Harris, Chicago, chairman; John C. Munro, Boston; G. C. Savage, Nashville, Tenn.; W. A. Jayne, Denver; H. Bert Ellis, Los Angeles.

Committee on National Incorporation.—Joseph D. Bryant, chairman, New York; H. L. E. Johnson, Washington, D. C.; Leartus Connor, Detroit; D. S. Fairchild, Des Moines, Iowa, and C. G. Kenyon, San Francisco.

Judicial Council.—P. Maxwell Foshay, Illinois; D. C. Peyton, Indiana: F. H. Wiggin, New York; George Ben Johnston, Virginia; W. B. Russ, Texas.

Committee on Scientific Research.—Alfred Stengel, Philadelphia, chairman; William Osler, Baltimore, and L. Hektoen, Chicago.

Committee on Organization.—J. N. McCormack, Bowling Green, Ky., chairman; P. Maxwell Foshay, Chicago; George H. Simmons, Chicago.

Council on Medical Education.—Arthur Dean Bevan, Illinois, chairman; W. T. Councilman, Massachusetts; J. A. Witherspoon, Tennessee; Charles H. Frazier, Pennsylvania; Victor C. Vaughan, Michigan.

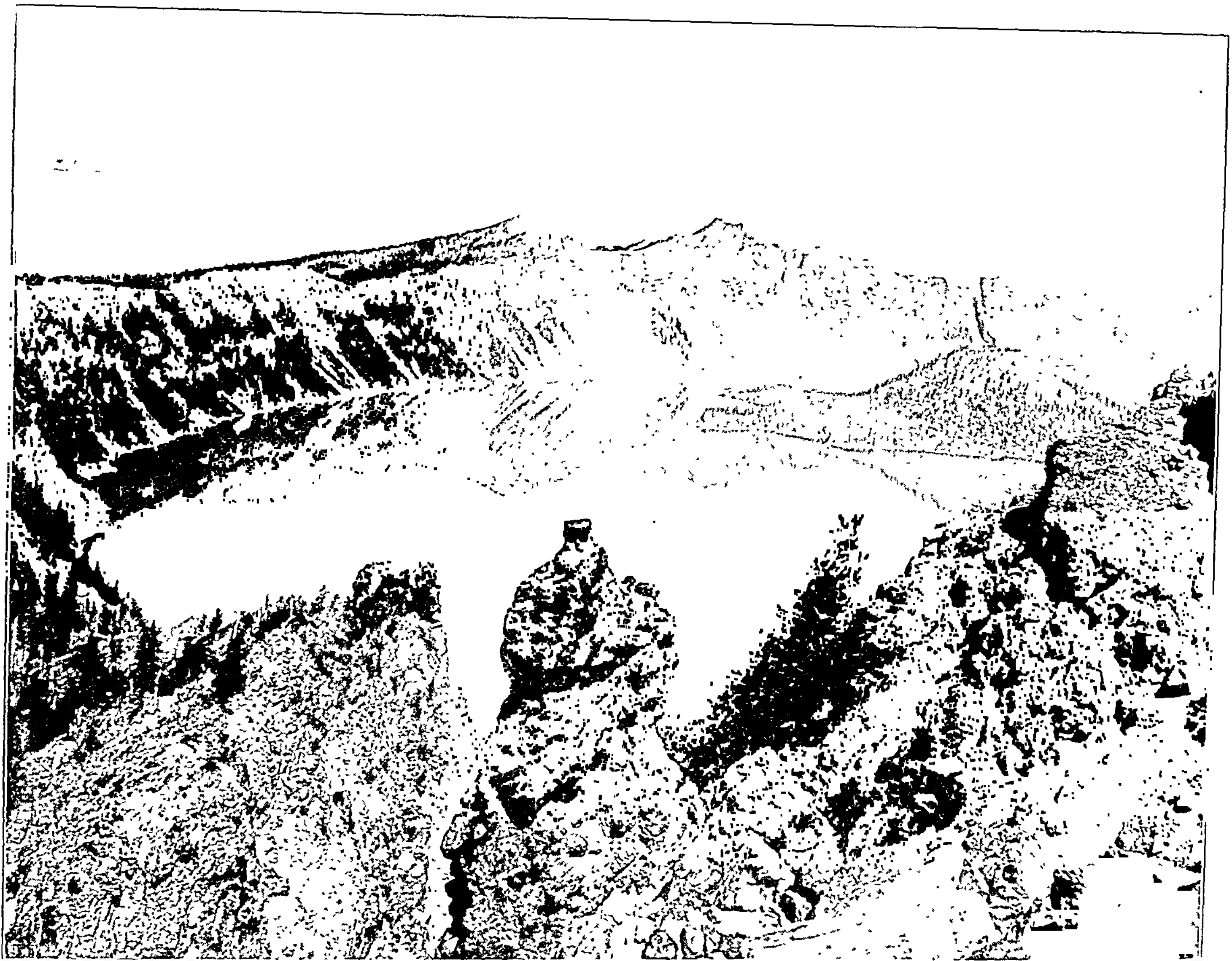

Fig. 2.*—Crater Lake, in southern Oregon.

ASSOCIATION COMMITTEES.

List of the Members of the Committees of the American Medical Association.

Committee on Award of Senn Medal.—J. E. Moore, Minneapolis, chairman; M. L. Harris, Chicago; Floyd W. McRae, Atlanta, Ga.

Committee on Scientific Exhibit.—F. B. Wynn, Indianapolis, director; W. M. L. Coplin, Philadelphia; Walter L. Bierring, Iowa City, Iowa; Horace J. Whitacre, Cincinnati; William T. Eckley, Chicago; W. Ophuls, San Francisco; O. P. Jenkins, Stanford University, Cal.

Committee on Rush Monument.—James C. Wilson, Philadelphia, chairman; Henry D. Holton, Brattlebro, Vt., treasurer; Frank Billings, Chicago; L. Duncan Bulkley, New York; William L. Rodman, Philadelphia.

PRELIMINARY PROGRAMS OF SECTIONS.

The following is a partial list of titles of papers to be read before the various sections at Portland. The order in which the titles are printed here will not necessarily be followed in the official program.

SECTION ON PRACTICE OF MEDICINE.

Chairman, Richard C. Cabot, Boston; Secretary, Joseph L. Miller, 100 State St., Chicago.

SYMPOSIUM ON NEPHRITIS.

The Relation of Albuminuria to Nephritis. Alfred Stengel, Philadelphia.

The Relation of Cylindruria to Nephritis. C. P. Emerson, Baltimore.

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* Editor's Note: A number of the photographs from which these views of Portland and Oregon scenery were made are copyrighted by Kiser Brothers, Portland. Oregon. We acknowledge their courtesy in allowing The Journal to reproduce them.

The Cryoscopy of the Urine in Nephritis. Theodore Tieken. Chicago.

The Varieties of Nephritis (Clinical and Pathologic Division). W. T. Councilman. Boston.

Renal Insufficiency. Charles L. Green, St. Paul.

The Relation of Nephritis to Puerperal Eclampsia and of the Latter to Acute Liver Atrophy. P. K. Brown, San Francisco.

The Dietetic Treatment, with Special Reference to von Noorden. F. C. Shattuck. Boston.

Uncinariasis. B. K. Ashford and W. W. King, Porto Rico.

Symptoms. Diagnosis and Prognosis of Amebiasis in the Tropics. W. E. Musgrave, Manila, P. I.

SYMPOSIUM ON GASTRIC CONDITIONS.

Recent Advances in the Physiology of Human Nutrition. Frank Billings, Chicago.

Limitation and Uses of a Knowledge of Gastric Chemistry (with Demonstrations). George Dock. Ann Arbor, Mich.

Non-Gastric Diseases Presenting Themselves with Gastric Symptoms. J. H. Musser. Philadelphia.

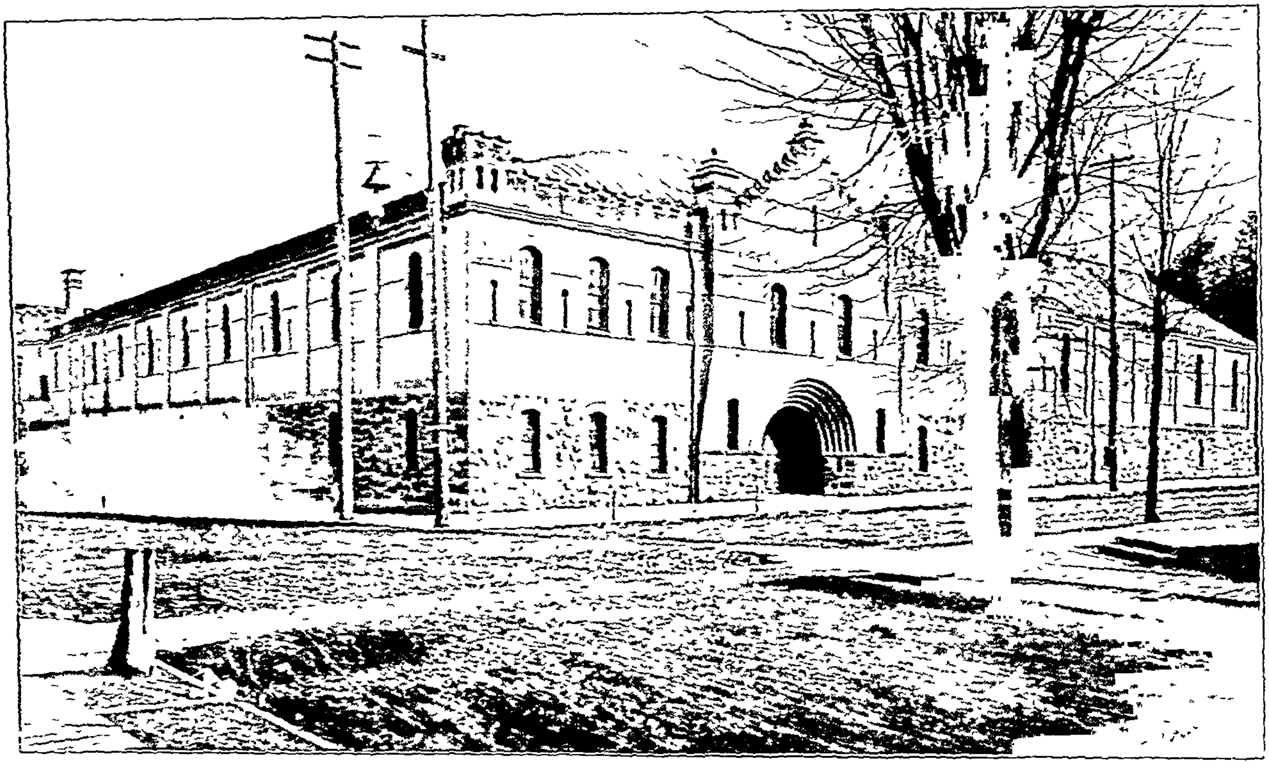

Fig. 3.—Oregon National Guard Armory. Meeting place of General Meetings Section on Surgery and Anatomy and Section on Practice of Medicine Location of branch postoffice, registration department, pharmaceutical and appliance exhibit, information bureau, etc. Across the street is the *location of the Scientific Exhibit and the meeting places* of all the other sections except two, the Section on Ophthalmology and the Section on Laryngology *and Otology*. These two sections will meet four blocks away.

The Diagnosis and Treatment of Gastric Stasis from Any Cause. C. G. Stockton, Buffalo.

Coccidoidal Granuloma. William Ophüls. San Francisco.

The Effects of the Inhalation of the Fumes of Nitric Acid, with Report of Cases. J. N. Hall. Denver.

Mountain Fever. Henry Sewall. Denver.

The Significance of Blood Pressure in Comparative Health. H W. Cook. Baltimore.

The Incidence of Heart Disease in San Francisco. W. F. Cheney.

Value of Various Hemoglobin Instruments to the General Practitioner. M. H. Fussell. Philadelphia.

A Type of Tuberculosis on the North Pacific Coast. Woods Hutchinson. Portland. Ore.

A Comparative Study of Tuberculosis in Negroes and Whites. John T. Moore. Galveston.

Clinical Aspects of Amebic Abscess of Liver. W. S. Thayer. Baltimore.

Studies in Roentgen Ray Diagnosis of Chest Diseases. James E. Talley and William S. Newcomet, Philadelphia.

Beriberi on the Pacific Coast. K. A. J. MacKenzie, Portland, Ore.

Thyroid Disease in California. H. C. Moffitt, San Francisco.

SECTION ON OBSTETRICS AND DISEASES OF WOMEN.

Chairman, C. L. Bonifield, Cincinnati; Secretary, W. P. Manton, Detroit.

Chairman's Address. C. L. Bonifield, Cincinnati.

The Anatomy of the Pelvic Floor, with Relation to Its Lacerations and Repair. S. Stark, Cincinnati.

A Review of Pelvic Measurements Made in My Hospital, Dispensary and Private Practice During the Past Five Years. Effa V. Davis, Chicago.

Repair of the Perineum (Illustrated by Lantern Slides). G. B. Somers, San Francisco.

Pregnancy Following Operations for the Cure of Retrodisplacements of the Uterus. Franklin H. Martin, Chicago.

Tubal Pregnancy, with Report of Instructive Case. J. Riddle Goffe, New York.

Some Indications for Surgical Operations During Pregnancy. A. E. Benjamin. Minneapolis.

Overlapping the Fasciæ in the Closure of Wounds of the Abdominal Wall. Charles P. Noble, Philadelphia.

The Innocent Fibromyoma of the Uterus. Thomas Barker Eastman. Indianapolis.

Etiology and Treatment of So-Called Endometritis. Ernest F. Tucker. Portland. Ore.

The Conservation or Restoration of Normal Anatomy in Gynecologic Surgery. Daniel H. Craig, Boston.

Present-Day Methods of Conducting Labor Cases and Results Obtained. John A. McKenna. Lansdowne, Pa.

The Physiologic and Legal Status of the Fetus in Utero. W. H. Sanders. Montgomery, Ala.

The Maternal Impression Superstition in Modern Obstetric Teaching. Edwin Taylor Shelly. Atchison. Kan.

Maternal Syphilis. George S. Whiteside, Portland, Ore.

Some Cases of Extra-Uterine Pregnancy. J. H. Carstens, Detroit.

The Best Methods of Closure of Aseptic Wounds, Especially of the Abdomen. Henry O. Marcy, Boston.

Hysteromyomectomy versus Hysterectomy for Fibroids; A Plea for Conservatism When Operating on Women Under Forty. C. C. Frederick, Buffalo.

Some Causes of Failure After Successful Gynecologic Operations. William E. Ground, Superior, Wis.

Pulmonary Tuberculosis as an Obstetric Complication. C. S. Bacon, Chicago.

Postoperative Pelvic Exudates. W. Francis B. Wakefield, San Francisco.

An Operation for Pyosalpinx without Ligature, Clamp, Artery Forceps or Bleeding by Overthrow Provisional Suture Method. Report of 59 Cases with One Death. W. D. Kelly, St. Paul.

Some Complications of Pregnancy Treated Surgically. Francis D. Donoghue, Boston.

Gonorrhea in the Female; A Discussion of Its Diagnosis and Frequency. L. H. Dunning, Indianapolis.

The Results of Amputation of the Cervix Uteri in Chronic Metritis. C. Jeff Miller, New Orleans.

Hernia of the Fallopian Tube. Frank T. Andrews, Chicago.

Syncytioma Malignum. Laura H. Branson, Iowa City, Iowa.

Fourth Detailed Report of the Superior and Lasting Results of My Bi-inguinal Operation for Simple and Complicated Aseptic Retroversion of the Uterus. A. Goldspohn, Chicago.

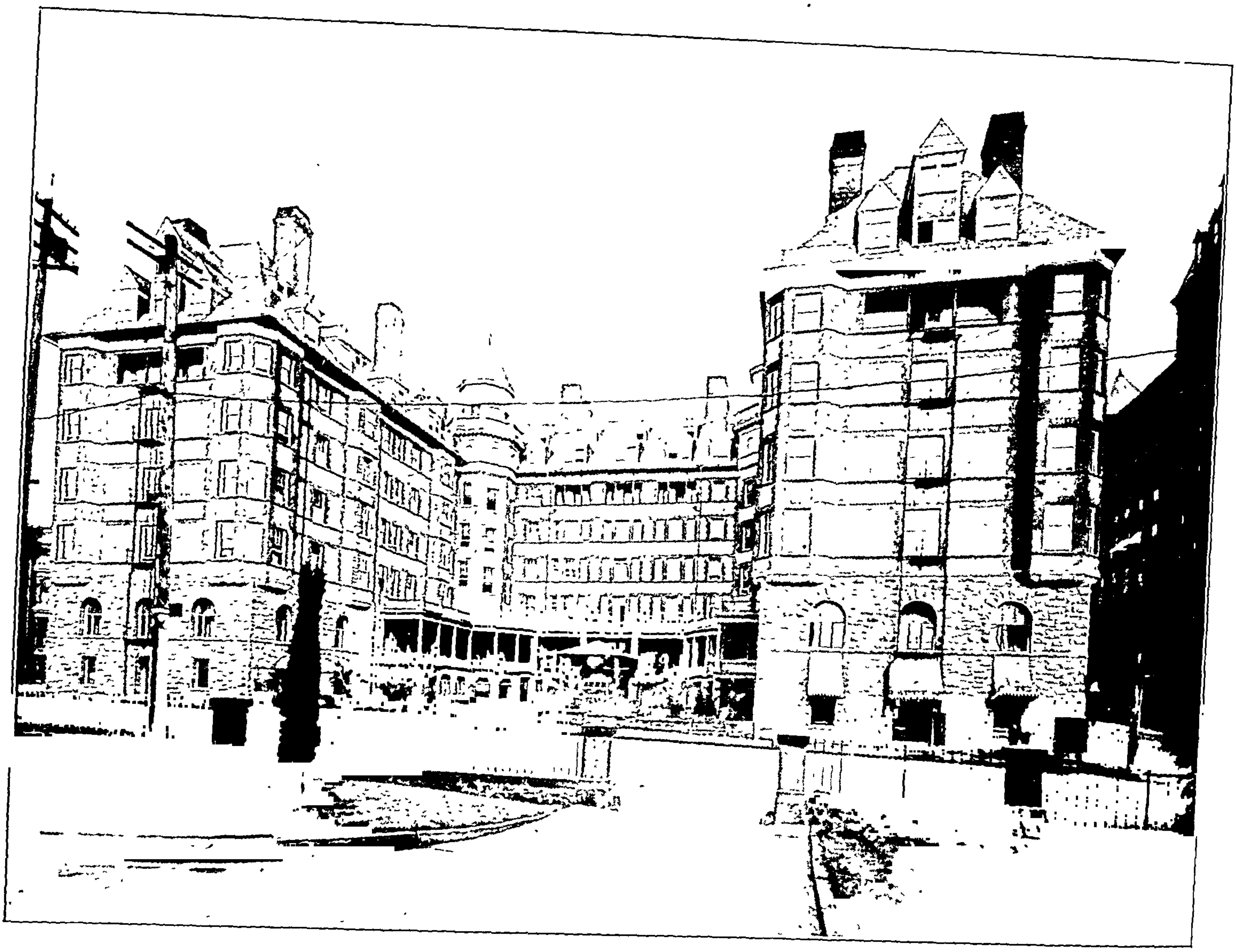

Fig. 4.—Portland Hotel. Headquarters.

SECTION ON SURGERY AND ANATOMY.

Chairman, Maurice H. Richardson, Boston; Secretary, Floyd W. McRae, Atlanta, Ga.

Chairman's Address: Maurice H. Richardson, Boston.

The Cure of Inguinal Hernia. Henry O. Marcy, Boston.

Colohepatopexy or Colon Substitution; a Remedy for Perigastric Adhesions After Gallstone Operations. E. Wyllys Andrews, Chicago.

Splanchnoptosis from a Surgical Standpoint. James E. Moore, Minneapolis.

Early Diagnosis of Gastric Ulcer. H. D. Niles, Salt Lake City.

Clinical Experiences with the Use of the McGraw Elastic Ligature. A. J. Ochsner.

Ulcer of the Stomach and First Portion of the Duodenum, with Especial Reference to the Operative Treatment. W. J. Mayo, Rochester, Minn.

Gallstones in the Common Duct. W. D. Haggard, Nashville, Tenn.

Cysts of the Spleen. W. A. Bryan, Nashville, Tenn.

Indications for the Removal of the Pathologic Spleen. B. B. Davis, Omaha.

Exstrophy of the Bladder Treated Successfully by Peter's Method, with Illustrations. Harry M. Sherman, San Francisco.

The Bloodless Resection of the Rectum. Ernest Laplace, Philadelphia.

End Results of 100 Operations for Cancer of the Breast. Homer Gage, Worcester, Mass.

Lip Operation for Cancer and Deformity, with Report of Cases. W. W. Grant, Denver.

Esophagectomy, with Report of Case with Prothetic Appliances. Wallace I. Terry, San Francisco.

Tuberculosis of the Kidney. J. Garland Sherrill. Louisville.

The Value of Skiagraphy in Lithiasis and Tuberculosis of the Kidney. Carl Beck, New York.

Anaërobic Cellulitus, with Report of Successful Cases. J. Clark Stewart. Minneapolis.

Ununited Fracture and Cases of Delayed Union. Casper W. Sharples. Portland, Ore.

A Clinical Chart for the Record of Patients in a Small Hospital. George F. Wilson. Portland, Ore.

Surgery and Pathology of Thyroid Gland. Joseph C. Bloodgood. Baltimore.

Surgery of the Spinal Cord. J. B. Murphy, Chicago.

Fibroid Growths of the Abdominal Wall. Charles A. Powers, Denver.

Penetrating Wounds of the Abdomen. R. Winslow, Baltimore.

Meckel's Diverticulum as a Cause of Abdominal Crises. Miles F. Porter. Ft. Wayne. Ind.

Perforations in Typhoid Fever. Richard H. Harte, Philadelphia.

Further Experiences with the Radical Operation for the Cure of Aneurism by Aneurismorrhaphy. Rudolph Matas, New Orleans.

Observations on Postoperative Stimulation Based on 6,000 Major Operations. G. W. Crile. Cleveland.

Tuberculosis of the Kidney. Leonard Freeman. Denver.

Non Calculus Cholecystitis. Davis S. Fairchild. Des Moines, Iowa.

Cancer. William L. Rodman. Philadelphia.

Acid Intoxication and Late Poisonous Effects from Ether and Chloroform. Arthur D. Bevan. Chicago.

Preliminary Report of a Study of Tetanus. James M. Anders, Philadelphia.

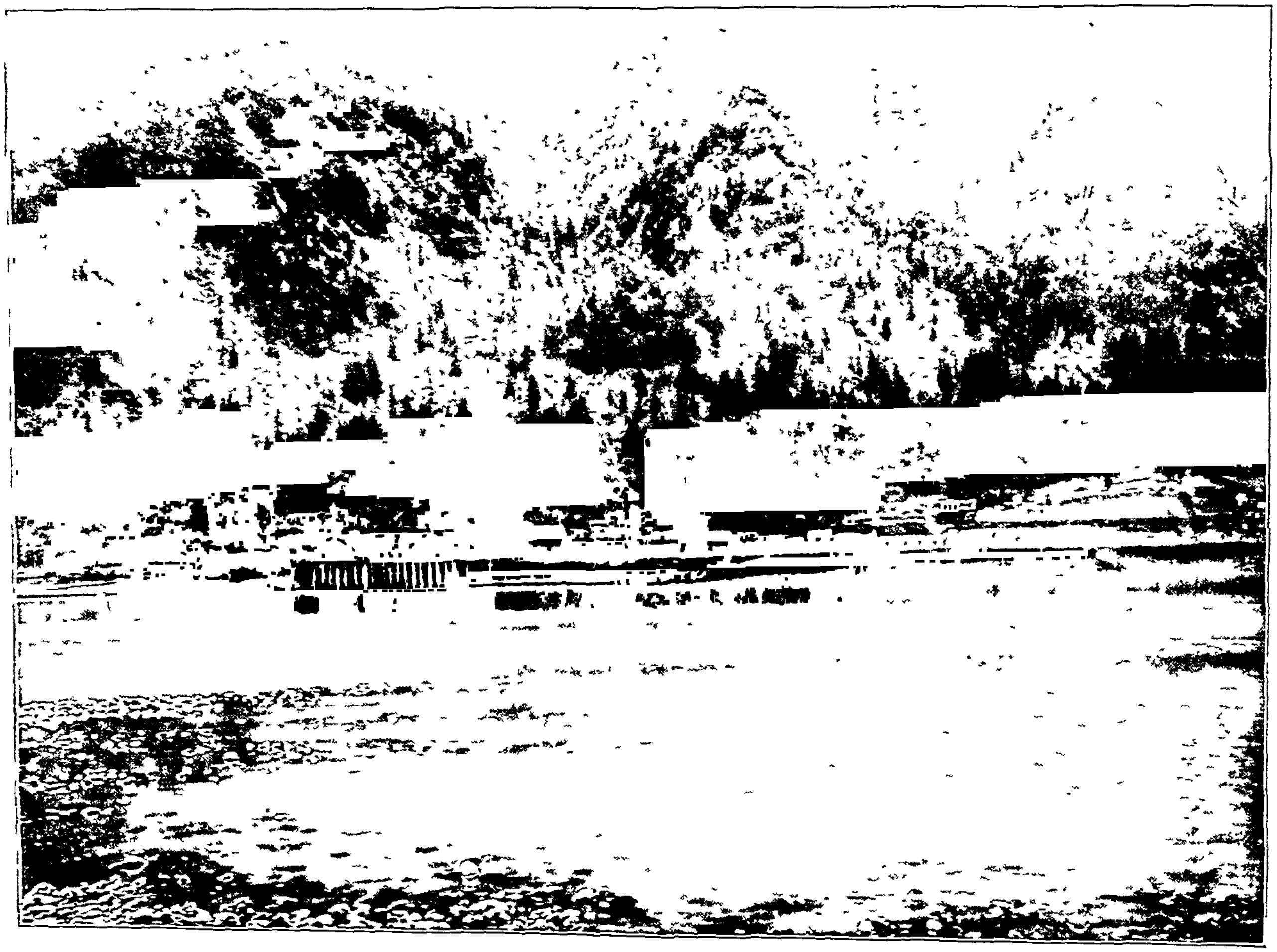

Fig 5.—Columbia River excursion scenery Cascade range.

Papers, the titles of which have not been received, will be read by Kenneth A. J. MacKenzie, Portland, Ore.; Park Weed Willis, Seattle, Wash.; A. H. Cordier, Kansas City, Mo., and Harvey Cushing. Baltimore.

SECTION ON HYGIENE AND SANITARY SCIENCE.

CHAIRMAN, JOHN S. FULTON, BALTIMORE; SECRETARY. M. L. PRICE, BALTIMORE.

The preliminary program of this section has not been received.

SECTION ON OPHTHALMOLOGY.

CHAIRMAN, CHRISTIAN R. HOLMES, CINCINNATI; SECRETARY, ALBERT E. BULSON, JR., FORT WAYNE, IND.

Chairman's Address: Studies of School and Hospital Hygiene of Interest to the Ophthalmic Surgeon (Illustrated with Lantern Slides). Christian R. Holmes. Cincinnati.

Address (by special invitation). J. Hirschberg, Berlin.

The Ocular Symptoms of Affections of the Accessory Sinuses of the Nose. William Campbell Posey, Philadelphia.

Demonstration of a Simple Method of Accurately Localizing by the X-Ray a Foreign Body in the Eye. Vard H. Hulen, San Francisco.

The Treatment of Recent Embolism of the Retinal Arteries by Digital Massage. H. V. Würdemann, Milwaukee, Wis.

Is Keratitis Ever Caused by Rheumatism? Leartus Connor, Detroit.

The Correction of Exophoria by the Development of the Interni. W. H. Roberts, Pasadena, Cal.

Description of an *Advancement Suture with Collective Suggestions Regarding Operations on the Ocular Muscles.* Mark D. Stevenson, Akron, Ohio.

Lateral Displacement of Tendon Insertions for the Cure of Strabismus. Edward Jackson, Denver.

The Prevention and Cure of Progressive Axial Myopia by Appropriate Treatment of the Internal and External Recti Muscles, with Report of Cases. F. S. Crocker, Chicago.

Transitory Paralysis of the Abducens, with Report of Cases. Meyer Wiener, St. Louis.

The Extraction of Uncomplicated Immature Senile Cataract. Albert E. Bulson, Jr., Fort Wayne, Ind.

Blasting Eye Injuries. John A. Donovan, Butte, Mont.

Some Eye Injuries and Their Lessons. F. C. Heath, Indianapolis.

Non-Toxic Amblyopia. T. W. Moore, Huntington, W. Va.

Amblyopia Caused by Wood Alcohol. C. S. G. Nagel, San Francisco.

A Contribution to the Methods of Restoring the Socket for Prothesis. William H. Wilder, Chicago.

Subconjunctival Salt Injections. Samuel D. Risley, Philadelphia.

Rat-tail Tendons for Sutures in Eye Surgery. Kaspar Pischel, San Francisco.

The Physiologic Action of Dionin. Walter Hamilton Snyder, Toledo, Ohio.

New Test Types Made According to Geometric Progression. Charles H. Williams, Boston.

Traumatic Lesions of the Eye. Frank W. Miller, Los Angeles, Cal.

SECTION ON DISEASES OF CHILDREN.

Chairman, John Lovett Morse, Boston; Secretary, J. Ross Snyder, Birmingham, Ala.

Chairman's Address: The Teaching of Pediatrics. J. L. Morse, Boston.

A Plea for Better Education of the Laity in the Prevention of Disease, with Especial Reference to Childhood and Adolescence. R. H. Harvey, Chicago.

A Plea for National and Local Boards of School Hygiene. A. M. Smith, Tacoma, Wash.

Rules for the Care of Young Infants in Public Institutions. H. M. McClanahan, Omaha.

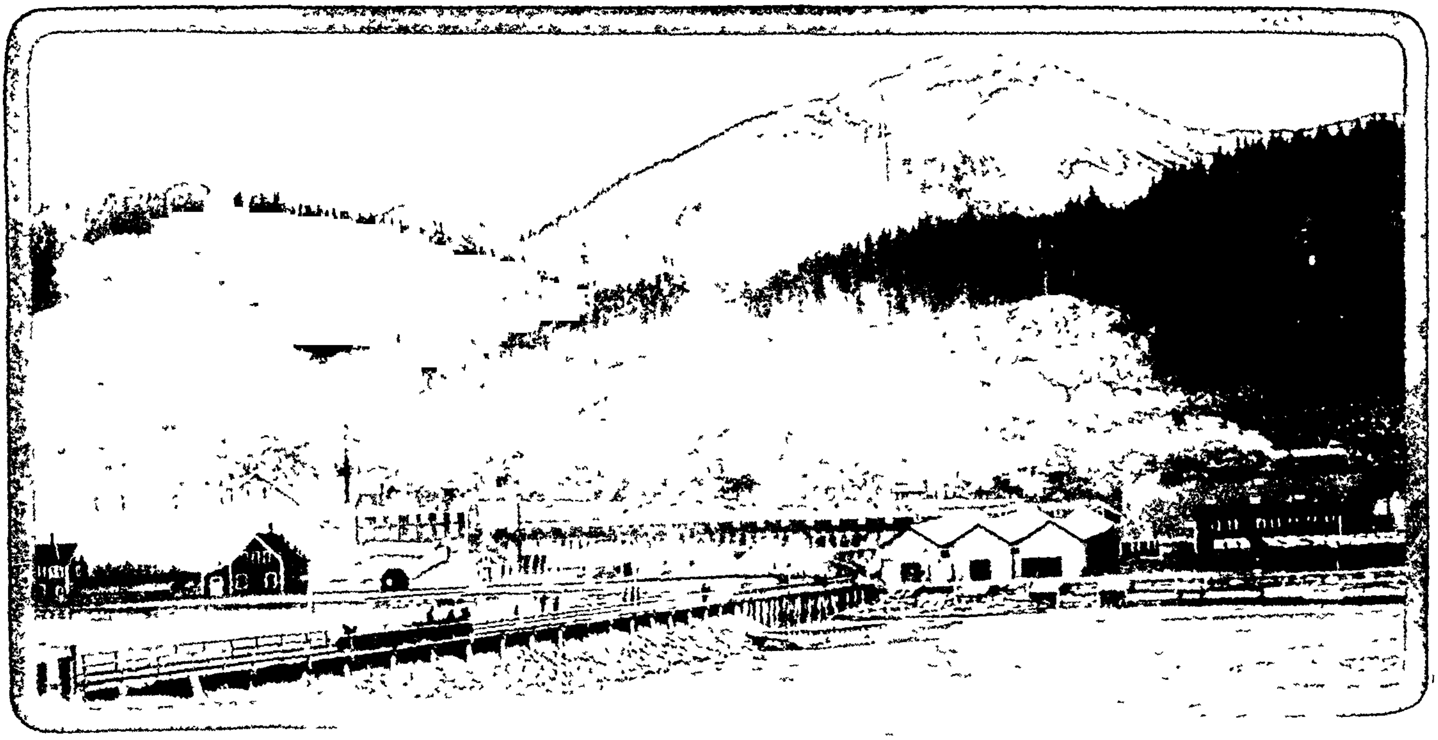

Fig. 6.—Treadwell Mine, and the largest stamp mill in the world, operating one thousand stamps This is on Douglass Island, on the Alaska trip.

Experimental and Clinical Evidence of Dynamic (Spastic) Astigmatism. Practical Conclusions. F. B. Eaton, San Francisco.

Sympathetic Inflammation Following Panophthalmitis. William Zentmayer, Philadelphia.

Spontaneous Hemorrhage in the Orbit. J. W. Reynolds, Creston, Iowa.

Contributions to the Ocular Pathology of (a) Primary Epithelioma of the Cornea; (b) Panophthalmitis from Bacillus Subtilis. Report of Two Cases. George T. Brady, San Francisco.

Differential Diagnosis of Intraorbital Tumors. Report of Unique Case. Flavel B. Tiffany, Kansas City, Mo.

Endothelio-Cylindroma of the Orbit, with Report of a Case. Removal with Preservation of the Vision and Motility of the Eye. John E. Weeks, New York.

A Case of Iritis Tuberculosa Cured by Koch's Tuberculin. E. V. L. Brown, Chicago.

Amaurotic Family Idiocy. A. C. Cotton, Chicago.

Ataxia of Central Origin Appearing in Childhood. A. W. Fairbanks, Boston.

The Prevention of Summer Diarrhea. M. Ostheimer, Philadelphia.

Typhoid in Children; A Clinical Study of 210 Cases. W. J Butler, Chicago.

The Management of Typhoid Fever in Children. W. C. Hollopeter, Philadelphia.

Pneumonia in Children. E. F. Wells, Chicago

Pleural Effusions in Children. C. F. Wahrer, Ft. Madison, Iowa.

Vaccination in Whooping Cough and the Use of Adrenal Preparations. E. W. Saunders, St. Louis.

The After-Effects of Diphtheria on the Heart. A Preliminary Report. F. W. White, Boston, Mass.

Malignant Diseases of Ovary in Childhood. W. A. Edwards, Los Angeles, Cal.

Report of Case of Imperforate Rectum, with Absence of Anus. E. H. Small, Pittsburg, Pa.

Surgical Intervention for the Intracranial Hemorrhages of the New Born. Harvey Cushing, Baltimore.

Surgical Treatment of Congenital Pyloric Stenosis. J. C. Munro, Boston.

Can Retention of the Tube in Operative Treatment of Diphtheritic Laryngeal Stenosis Be Avoided? F. G. Burrows, San Francisco.

A Study of Eighteen Cases of Diarrhea in Children. J. C. Cook, Chicago.

Hemorrhages Into the Spinal Meninges of New Born. I. A. Abt, Chicago.

Ringworm and Some of Its Allied Affections. A Practical Demonstration from Lantern Slides. M. L. Heidingsfeld, Cincinnati.

A paper, title not received, by J. H. M. Knox, Baltimore.

SECTION ON STOMATOLOGY.

Chairman, Vida A. Latham, Rogers Park, Chicago; Secretary, Eugene S. Talbot, 103 State St., Chicago.

Chairman's Address. Vida A. Latham, Chicago.

Fatal Oral Pathologic Conditions. G. V. I. Brown, Milwaukee, Wis.

Surgical Bacteriology of the Mouth. A. H. Levings, Milwaukee, Wis.

Surgical Aspects of Disturbed Dentition of the Third Molar. M. L. Rhein, New York City.

The Treatment of Suppurative Affections of the Face and Neck Emanating from Mouth. M. I. Schamberg, Philadelphia.

The Medical Relations of Certain Conditions of the Mouth. L. Duncan Bulkley, New York City.

Some Effects of Inebriety on the Teeth and Jaws. T. D. Crothers, Hartford, Conn.

The Ossification of the Lower Jaw. Edward Fawcett, Bristol, England.

Ankylostomiasis and Tongue Pigment. T. M. Russell Leonard, Grenada, British West Indies.

Notes on Tooth Genesis in Man. H. W. Marett Tims, London, England.

The Etiology of Tooth Corrugations. G. Lenox Curtis, New York City.

To What Extent Are Teeth Necessary to the Human Being? M. H. Fletcher, Cincinnati.

The Roentgen Rays in Dentistry. M. Kassabian, Philadelphia.

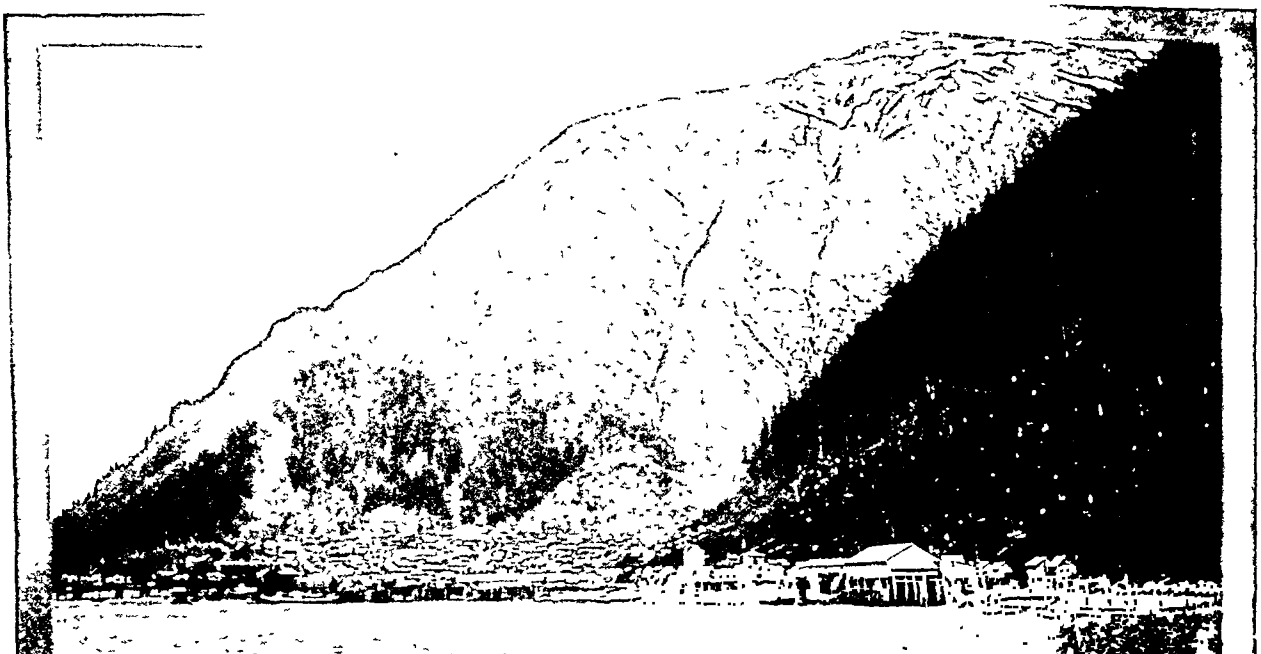

Fig 7.—Juneau, Alaska, on the excursion trip to Alaska.

The Causes and the Treatment of the Mouth Manifestations of Certain Metabolic Disorders. Alfred C. Croftan, Chicago.

The Oral Manifestations of Diabetes Mellitus. Hermann Prinz, St. Louis.

The Urine and Saliva in So-Called Pyorrhea Alveolaris. William J. Lederer, New York City.

Further Researches in the Treatment of Interstitial Gingivitis. Eugene S. Talbot, Chicago.

Excretion of Toxic Products into the Mouth, with Relation to Local Infection. Fenton B. Turck, Chicago.

A Common Ground for Medicine and Dentistry. Frank L. Platt, San Francisco.

The Physician as a Dentist. Calvin W. Knowles, San Francisco.

The Physician's Duty to the Child from a Dental Standpoint Alice M. Steeves, Boston.

Dentistry of To-morrow. H. P. Carlton, San Francisco.

What Will Probably Be the Dental Educational Standard for the Coming Decade? C. C. Chittenden, Madison, Wis.

SECTION ON NERVOUS AND MENTAL DISEASES.

Chairman, J. H. McBride, Pasadena, Cal.; Secretary, David I. Wolfstein, 22 W. Seventh St., Cincinnati.

Chairman's Address. J. H. McBride, Pasadena, Cal.

Report of Committee on Drug Addictions. Smith Ely Jelliffe (Chairman), New York.

Defects of Will from a Medical Standpoint. H. T. Pershing, Denver.

Neurasthenoid Conditions, So-Called Neurasthenia. Robert Hessler, Logansport, Ind.

Trauma and Shock as Factors in the Production of Mental and Nervous Diseases. Samuel Bell, Detroit.

The Individual Care of Borderline Cases of Mental Diseases (Minor Psychoses). Frank P. Norbury, Jacksonville, Ill.

Restraint of Liberty in the Treatment of Neurasthenic States. William S. Lindsay, Topeka, Kan.

The Localization of the Higher Psychic Functions, Especially with Reference to the Prefrontal Lobe Charles K. Mills and T. H. Weisenburg, Philadelphia.

Symptomatology of Cerebrospinal Arteriosclerosis, with Special Reference to Neurasthenic States. D. J. McCarthy, Philadelphia.

Landry's Paralysis, with Report of Cases. Robert McGregor, Saginaw, Mich.

A Case of Landry's Paralysis. Wharton Sinkler, Philadelphia.

Periodic Paralysis. G. E. Holtzapple, York, Pa.

The Tabetic Foot; Its Importance in the Causation of the Ataxia of the Lower Extremities. Sidney I. Schwab, St. Louis.

A Preliminary Report on Experimental Encephalitis. John H. W. Rhein, Philadelphia.

Nervous and Mental Manifestations of Pre-Pernicious Anemia. F. W. Langdon, Cincinnati.

The Abnormal Child. D. I. Wolfstein, Cincinnati.

Clinical Reports of Some Unique Cases of Hysteria. C. C. Hersman, Pittsburg, Pa.

Public Care of the Insane. J. M. Barstow, Council Bluffs, Iowa.

The Use of Fresh Egg Membrane in Brain Surgery. Albert E. Sterne, Indianapolis.

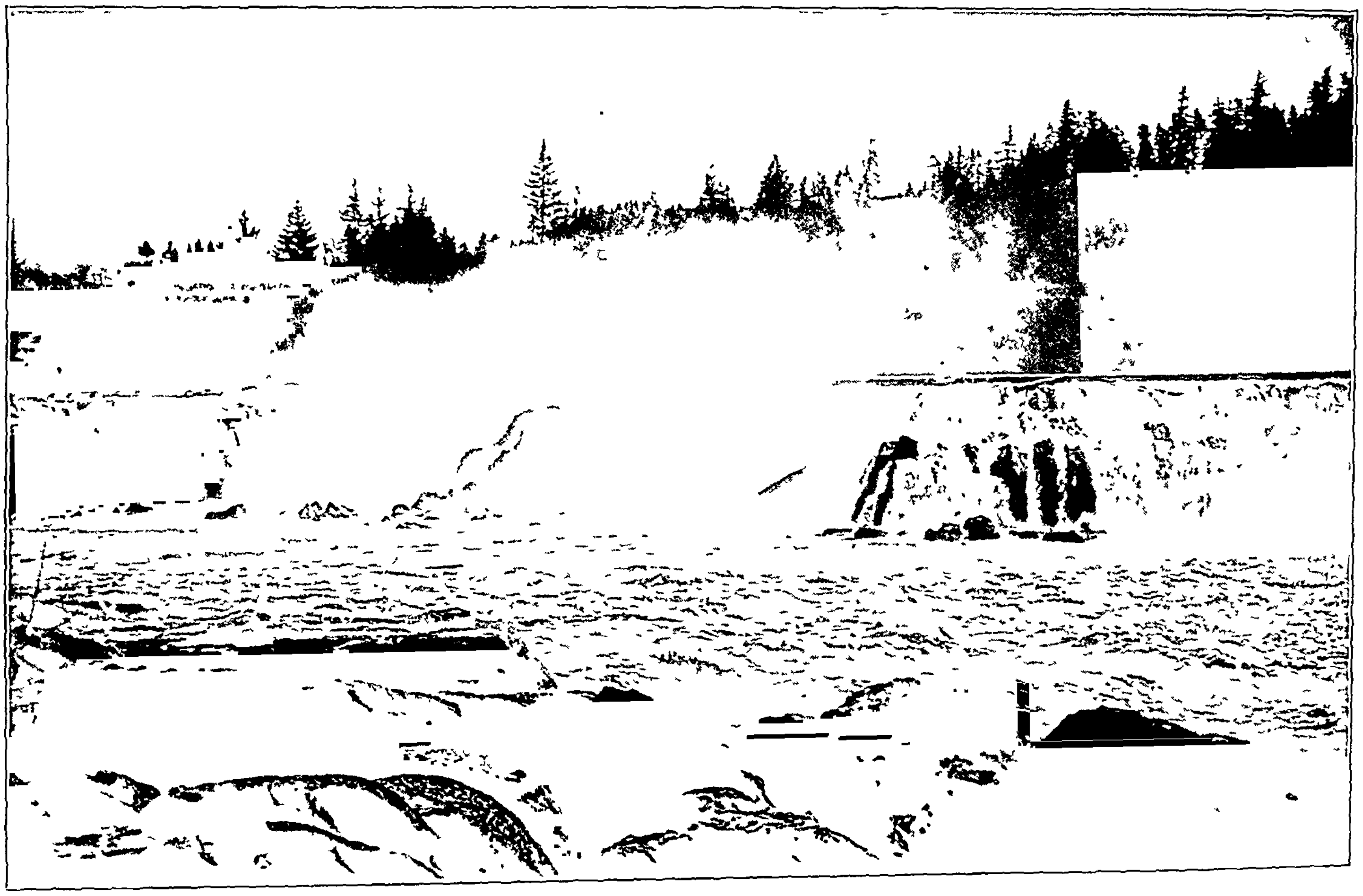

Fig. 8.—Willamette Falls, near Portland, on the Willamette River.

The Psychopathic Manifestations of the Non-Insane Psychoneuroses. John Punton, Kansas City, Mo.

Pre-natal Influences as a Causative Factor in the Production of Nervous and Other Diseases. W. H. Walling, Atlantic City, N. J.

The Psychosis of Morphinism. T. D. Crothers, Hartford, Conn.

The Relation Between Auditory Hallucination and Tinnitus Aurium. W. Sohier Bryant, New York City.

Comparison of the Quick and the Slow Methods of the Treatment of Morphinism. A. J. Pressey, Cleveland.

SECTION OF CUTANEOUS MEDICINE AND SURGERY.

Chairman, D. W. Montgomery, San Francisco; Secretary, R. R. Campbell, Chicago.

The preliminary program of this section has not been received.

SECTION ON LARYNGOLOGY AND OTOLOGY.

Chairman, Robert C. Myles, New York; Secretary, Otto T. Freer, Chicago.

Chairman's Address. Robert C. Myles, New York.

Laryngeal Edema. Harmon Smith, New York.

Angina Herpetica in Children. Henry L. Wagner, San Francisco.

The Treatment of Empyema of the Antrum Through the Nose. George L. Richards, Fall River, Mass.

Tonsillotomy versus Tonsillectomy. Joseph C. Beck, Chicago.

Tracheo-Thyrotomy for Malignant Diseases of the Larynx. Chevalier Jackson, Pittsburg.

Collodion as a Dressing After Intranasal Operations. A Preventive of Postoperative Hemorrhage (with Demonstrations). Kaspar Pischel, San Francisco.

The Vapor Method of Anesthesia. James T. Gwathmey, New York.

A Review of Fifty Operations for Deviated Septum by the Freer Method. P. J. H. Farrell, Chicago.

A Demonstration of the Window Resection Method for the Correction of Deflections of the Nasal Septum. O. T. Freer, Chicago.

The Correction of External Deformities of the Nose Associated with Deviation of the Septum. Charles M. Robertson, Chicago.

The Correction of Saddle-Nose by Bone Implantation. Cullen F. Welty, San Francisco.

The Deformed Nasal Septum in the Causation of Respiratory Diseases. Amos R. Solenberger, Colorado Springs.

Chronic Suppurative Ethmoiditis. Its Frequency and Bearing on So-Called Chronic Nasopharyngeal Catarrh. Redmond Payne, San Francisco.

Diagnosis of the Intracranial Complications Due to Middle Ear Suppurations. John F. Barnhill, Indianapolis.

Capital Operations for the Cure of Tinnitus Aurium. W. S. Bryant, New York.

Four Cases of Mastoid Operations Without Opening the An-

trum; Recovery; a Fifth, Periostitis only, and a Sixth, Destruction of Inner Table of Skull. George F. Cott, Buffalo.
A Report of Two Cases of Sinus Thrombosis. Hill Hastings, Los Angeles.
The Use of the Burr in Mastoid Operations. Adolph Barkan, San Francisco.
Exhibition of a New Tonsillotome. Edwin E. Straw, Marshfield, Ore.

SECTION ON PHARMACOLOGY.

CHAIRMAN, HEINRICH STERN, NEW YORK; SECRETARY, C. S. N. HALLBERG, 358 DEARBORN ST., CHICAGO.

Chairman's Address: Heinrich Stern, New York.
Report of Committee on Proprietary Medicines. C. S. N. Hallberg, W. J. Robinson, H. C. Wood, Jr.
Report of Committee to Aid Postoffice Department in Excluding Objectionable Advertisements. C. S. N. Hallberg, H. W. Wiley, H. C. Wood, Jr.
The Pharmacopeia of the United States of America; Its Functions. How May These Be Best Presented to the Medical Profession? William M. Searby, San Francisco.
The United States Pharmacopeia; Its Eighth Decennial Revision. The Organic Materia Medica. Albert Schneider, San Francisco.
The United States Pharmacopeia VIII. The Advance Indicated in Its Pharmacy. C. S. N. Hallberg, Chicago.
The Physician and Proprietary Medicines. George H. Simmons, Chicago.

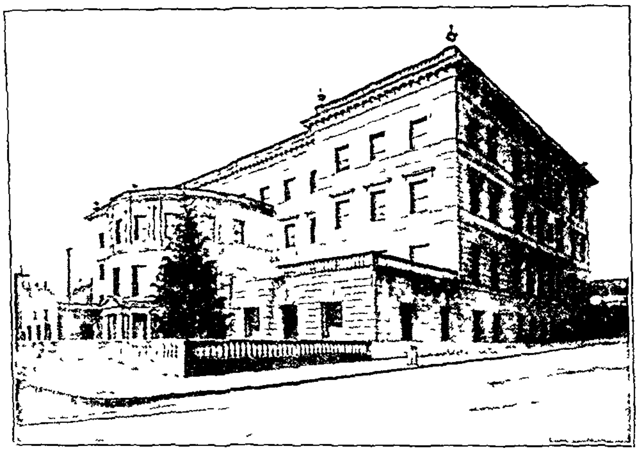

Fig. 9.—Portland City Hall.

A Practical Cure for the Substitution Evil. Edward A. Tracy, South Boston, Mass.
The Therapeutics of Lupulin. Thomas F. Reilly, New York.

SECTION ON PATHOLOGY AND PHYSIOLOGY.

CHAIRMAN, WINFIELD S. HALL, CHICAGO; SECRETARY, HENRY A. CHRISTIAN, BOSTON.

Chairman's Address: Pathologic Physiology—A Neglected Field. Winfield S. Hall, Chicago.
Case of Cholesterin Stones in Brain. E. E. Southard, Boston.
The Pathology of Varicella. E. E. Tyzzer, Boston.
Methemoglobin as a Factor of Conservative Metabolism. Bernard Oettinger, Denver.
The Pathology of Intestinal Amebiasis (Amebic Dysentery). Paul G. Wooley, Manila, P. I.
The Influence of Chronic Passive Congestion and Cirrhosis of the Liver on the Connective Tissue of the Spleen. Henry A. Christian, Boston.
Further Studies on Streptococcus Infection. G. F. Ruediger, Chicago.
Some Observations on Auscultation of the Abdomen. W. B. Cannon, Boston.
The Freezing Points of Blood and of Urine in Pneumonia; with a Description of a New Method. F. E. Schmidt, Chicago.
Variations in the Ratio of Diameters of the Normal Chest at Different Ages. The Form of the Phthisical Chest. W. A. Bessesen, Chicago.
Are the Proteolytic and Milk Curdling Effects of the Gastric Juice Due to One and the Same Enzyme? J. C. Hemmeter, Baltimore.
Errors in the Determination of Free HCl in the Gastric Juice. E. L. Whitney, Baltimore.
The Blood Plates; Their Microchemistry, Physiology, and Pathology. G. T. Kemp, Champaign, Ill.
A Critical Study of the Various Methods for Determining the Number of Plates in the Blood. J. H. Pratt, Boston.

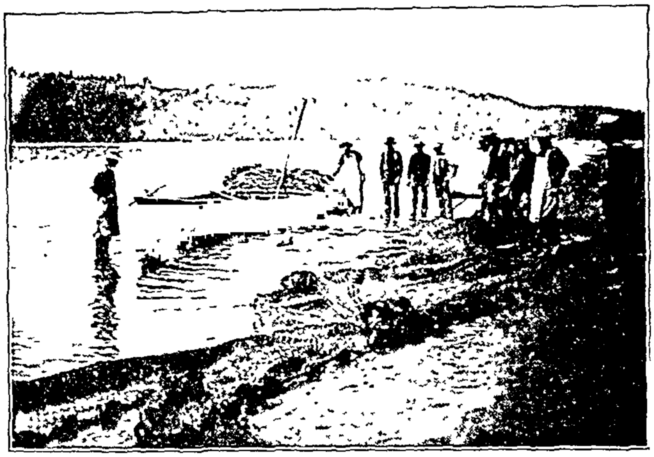

Fig. 10.—Seining on the Columbia River.

Ulcero-Membranous Angina (Vincent's Angina) and Stomatitis. George H. Weaver, Chicago.
Some Preliminary Steps in the Investigation of Gastric Functions. B. Onuf (Onufrowicz), Sonyea, N. Y.
Mode of Infection in Uncinariasis. Claude A. Smith, Atlanta.
A Further Report on Bacterial Cell Chemistry and Immunity. Victor C. Vaughan, Ann Arbor, Mich.
A New Bothriocephalid Tapeworm in Man. Henry B. Ward, Lincoln, Neb.
Temperature and Muscle Fatigue. F. S. Lee, New York.

Fig. 11.—Inside view of cannery, twenty tons of salmon being on receiving floor.

A Physico-chemical Theory of Fertilization. Martin H. Fischer, San Francisco.
Mineral Albumin Requirements in Health and Disease. L. Breisacher, Detroit.
The Secretion of Pepsin and Rennin: An Experimental Study. Gottfried Koehler, Chicago.
Mucocele of the Appendix. Alfred Stengel, Philadelphia.
Two Cases of Myoma of Esophagus. J. Bryant, Boston.
A paper, title not received, by F. R. Zeit, Chicago.

PORTLAND AND OREGON

FEW are the men who have such an intellectual grasp on the sequence of events as to be able to look forward 100 years and to predicate the resultant effects of all the intermediate transitory conditions. To be able to do this was supposed to be the special prerogative of the divinely inspired seer and prophet. And yet Thomas Jefferson, as the result of his political genius and knowledge of human history, looking forward over the years to come, saw clearly that the United States was to become a great nation, whose western boundary must be the shores of the Pacific Ocean.

At that time our great Northwest was a land as mythical as the location of the scenes of a Rider Haggard novel. Gray, with his ship *Columbia*, had, in 1792, entered the mouth of a great river, which emptied into the Pacific, and which has since been called by the name of his vessel. From the other side had come vague accounts, gathered of the Indians by Jonathan Carver, of a river which, taking its source in the "Stony Mountains," ran westward, and which he called the "Oregon," a name as mythical in its origin as the country through which it flowed; and, for years afterward, this name, as it occurred in the sonorous roll of Bryant's "Where rolls the Oregon," was but a terse expression for distance and vagueness.

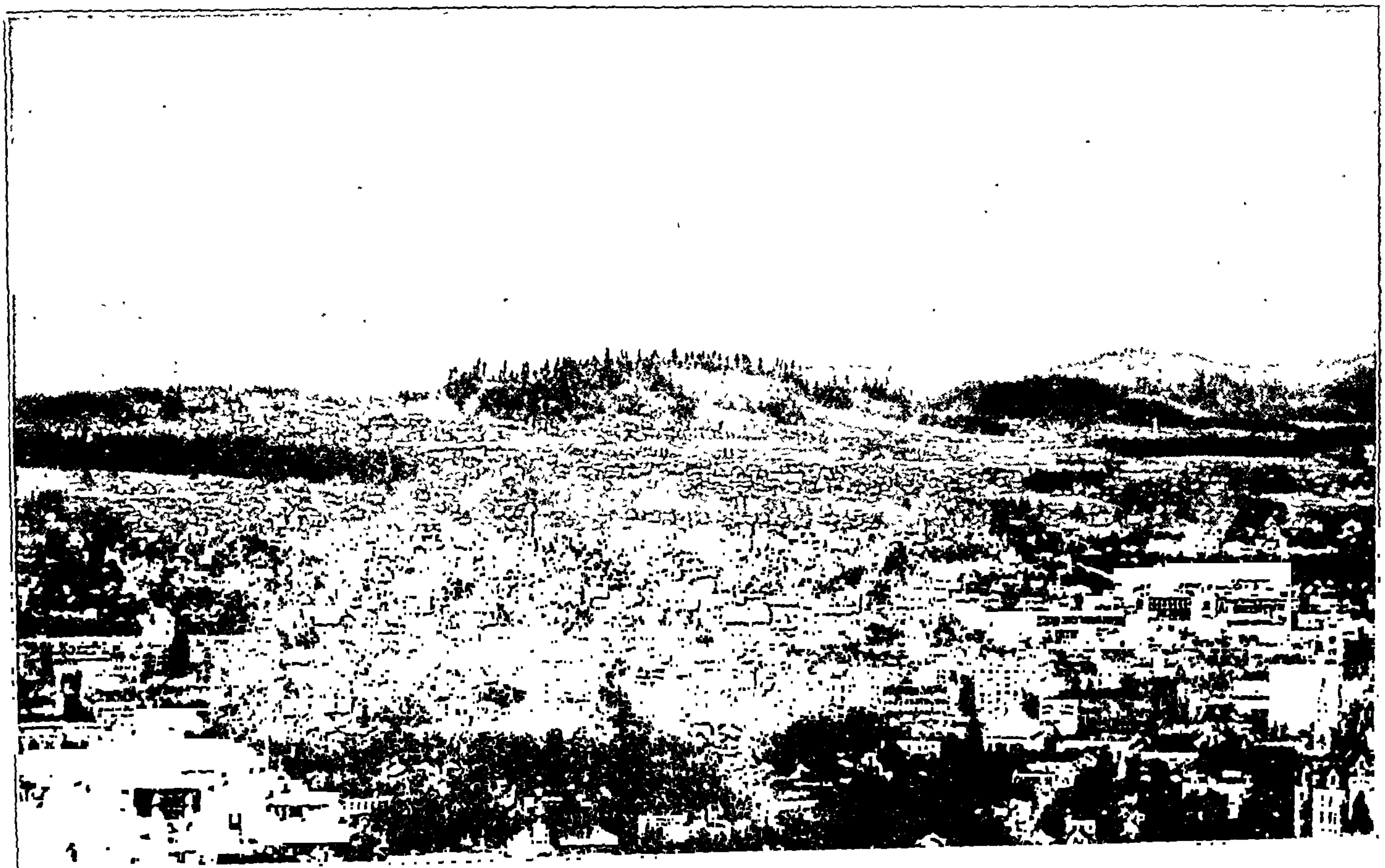

Fig. 12.—A view from Portland Heights, showing part of the city of Portland and Mt. Hood in the distance. Trips to the heights will be made by parties of members during the Portland session. Another view of Mt. Hood is given in Fig. 1.

To the prophetic mind of Thomas Jefferson this distance and vagueness were but temporary conditions. This country would in time be necessary for the inevitable expansion of the then young and growing nation. The result was the Lewis and Clark expedition, and what an expedition it was! Who that has ever read this simple, straightforward tale of hardship and struggle in an unknown country, amid all the dangers of hostile Indians and snow-clad mountains, can ever forget it? The splendid confidence and co-operation of the two young leaders, their warm, personal friendship, the care and foresight displayed by them in all their plans, the unswerving fidelity of every member of the party, and finally its completely successful execution, mark this as the very type of what such an expedition should be, and cause the heart of every American to thrill with pride.

In passing, it is well to call attention to the influence of Clark's medicine chest on the success of this enterprise. Clark seems to have possessed some crude ideas of surgery, and to have had considerable knowledge of the use of the more common drugs. He was constantly being called on to treat the sick among the various tribes, especially fevers, ulcers and sore eyes, and gained a reputation that he himself says became a source of worry to him. But his efforts secured the good will of the Indians and made friends when friends were needed. Who can estimate the influence of this belated acknowledgment of the services of Clark's medicine chest?

It was the Lewis and Clark expedition, together with Gray's discovery of the mouth of the Columbia River that, after many vicissitudes and disputes, finally decided the claims to the Oregon country in favor of the United States. The winter of 1805-6 was spent by the expedition at Fort Clatsop, near the mouth of the Columbia.

The Lewis and Clark Exposition, to be held at Portland this summer, June 1 to October 15, was determined on as a fitting recognition of this important event in our national history.

Here will be brought together the representative products and resources of this marvelous section of our country that a hundred years ago was a wilderness, "where rolled the Oregon," "and heard no sound save its own dashing."

The selection of Portland as the meeting place of the American Medical Association will thus afford an especially favorable opportunity to the members of our profession to see and to become acquainted with this section of our country. To those who love the beautiful and the sublime in nature (and who does not?) this trip will prove a revelation, no matter where they may have been before. In no part of our country has nature been so lavish in her handiwork as in the West. The meadows and the cultivated fields of the East give way to the boundless plains; the beautiful and symmetrical views of the Appalachian chain of mountains are here represented in the Rockies, Cascades and Sierra Nevadas by natural scenery, wherein beauty is supplemented by awe inspiring grandeur and symmetry by *sublimity*. By whatever route the visitor comes he will pass through some of this beautiful scenery before he reaches Portland. The view *from Portland alone of the snow*-capped peaks of Mt. Hood, Mt. St. Helens, Mt. Ranier, Mt. Adams and Mt. Jefferson with the Willamette and Columbia rivers in the foreground, is one that, competent critics say, is not to be had from any other city in the world.

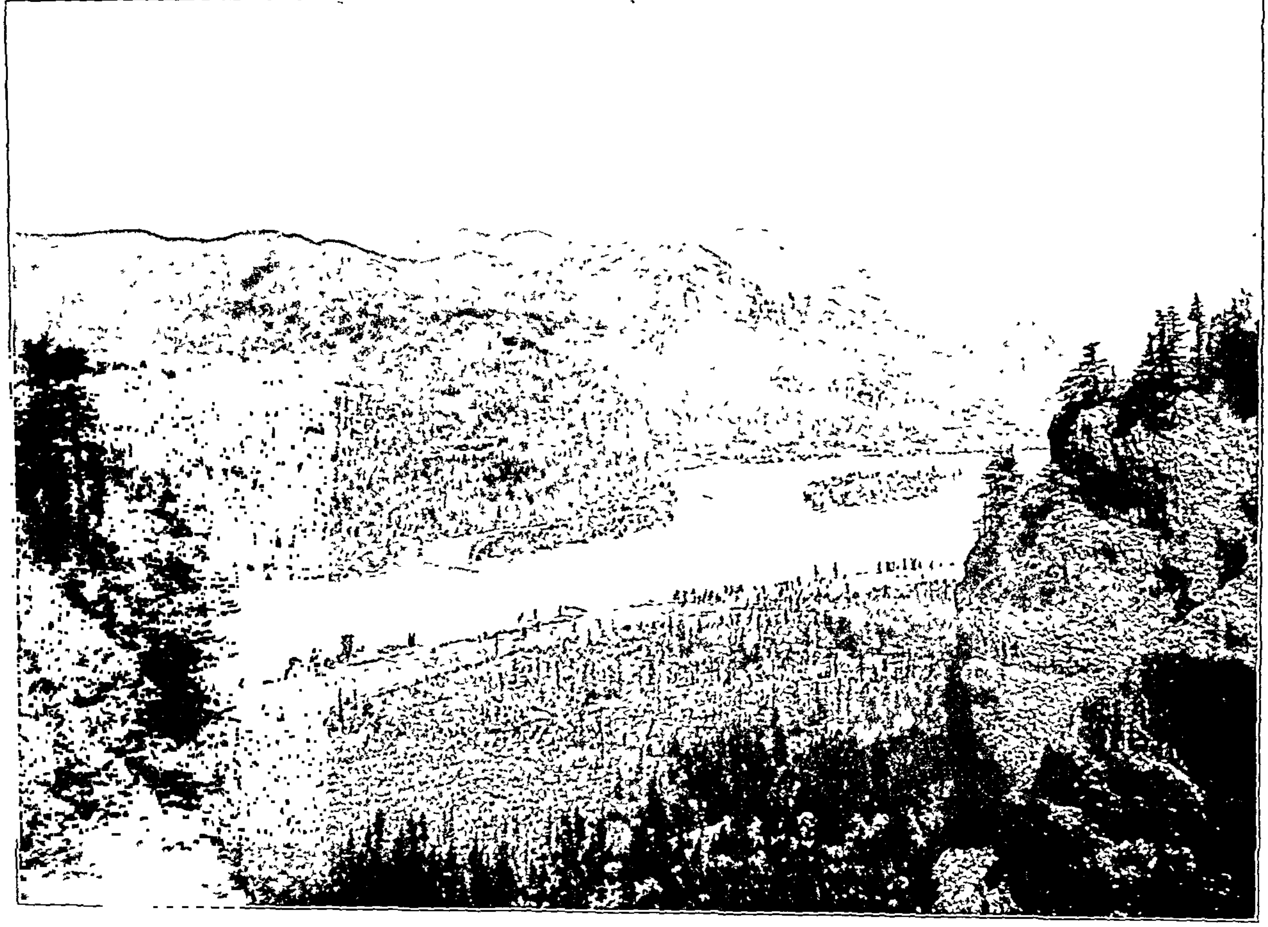

Fig. 13.—Panoramic view of Columbia River, taken from St. Peter's Dome, at a height of 2,300 feet, and showing Arrowhead Mountain, Bridge of the Gods, and Mt. Adams. Castle Rock, at the edge of the water on the opposite bank, is 1,100 feet high. *This* is a scene on one of the complimentary excursions given to the members of the American Medical Association by the Committee of Arrangements.

Residents of Oregon while visiting in the East are often asked many embarrassing questions in regard to our state, such as whether it is not a "part of California" or "just south of Alaska"; whether we have any churches and school houses and are we not "afraid of the Indians." We do not anticipate any such questions from the members of the American Medical Association, but think that a few facts by way of suggestion may be of interest to many who are visiting us for the first time.

Oregon is over 300 miles square; so do not blame us if we do not happen to know your friend merely because he lives in Oregon. He may live three or four hundred miles from Portland, in several directions, and still be in Oregon. Our New England friends may be interested in knowing that Portland was named after Portland, Me., by a former resident of the "Pine Tree State," *after having won the choice by the toss of* a coin with a man from Boston.

Portland is on the Willamette River *and not on the Columbia.* (Accent the second syllable in Willamette, if you would appear "to the manor born." It is thirteen miles from the Columbia by water and 100 from the ocean at Astoria. It has a square area of forty miles; a population of 150,000 people; a system of city water works that cost $4,000,000, furnishing its inhabitants the purest water in the world, direct from the glaciers of Mt. Hood; 31 public schools, with 14,500 pupils. It has 180 miles of electric railway and 260 miles of improved streets. *It has a delightful climate*, and the mortality for 1901 was only 9.01 per thousand inhabitants.

Portland exports more wheat than any other Pacific Coast port, and its sawmills cut 400,000,000 feet of lumber a year.

It produces finer roses and more of them than any city in the world, as the Committee of Arrangements hopes to prove to visitors; and from the heights back of the city one can have a series of views that will pay for a trip across the continent.

The salmon industry of the Columbia River annually produces $3,000,000. Let not the piscatorial instincts of our sporting friends become unduly aroused, for it is a tradition that the British government more readily resigned its claim to Oregon because some Englishmen who had been here reported that the salmon would not rise to the fly. They do, however, readily take the spoon at the Falls of the Willamette during May and June. The accompanying photograph of 20 tons of salmon lying on the floor of a cannery shows in what numbers they are caught in gill-nets and seines. The season will be on during the session of the Association, and the salmon business may be seen in all its phases.

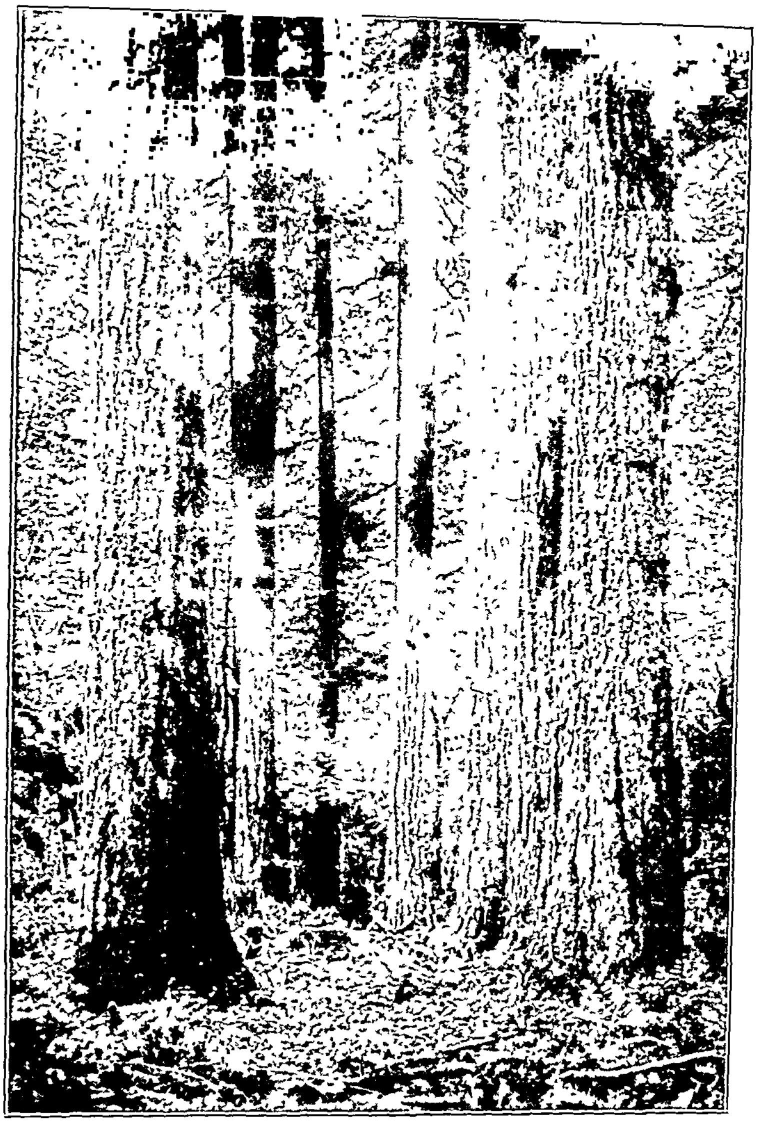

Fig. 14.—"Oregon underbrush," average height 250 feet.

The river at Portland affords splendid opportunity to those who enjoy boating. There is no more delightful way of spending the long twilight July evenings in Oregon than by a ride up or down the river in a motor boat, or lazily bending to the quiet dip of the sculls.

Lastly, a word to the sportsmen. The mountains of Oregon and the Northwest abound in game and the streams are full of trout. If one can spare the time and slight expense, one can arrange to stop off at almost any point where one's route crosses the mountains on any of the various railroads and can enjoy one's self to the heart's content.

It has been the object of the writer of this article to avoid detailed description, for the reason that such description, to be of value, could not be brought within the proper limits. It has been thought that, next to the scientific interest of the meeting, the natural scenery of our great Northwest would be the one thing that would prove most attractive to our visitors. We have, for this reason, dwelt rather in suggestive generalities concerning the history, geography and resources of our country and, for illustrations, have chosen material as characteristic of the far West and as different from other sections as we could find. We are sure that a trip to this meeting of the American Medical Association will give enlarged views of the size, diversity and grandeur of our great Republic and make better and broader Americans of us all.

Fig. 15.—Bridal Veil Falls, 100 feet high, on the Columbia River.

The Committee of Arrangements extends to all a hearty invitation to visit Portland, promising an abundant entertainment and a profitable and interesting time; and this, too, with a full appreciation of the reputation of the West for hospitality. F. C.

RAILROAD RATES.

Favorable Excursion Rates Secured with Long Time Limit and Stopover Privileges.

The announcement of the Committee on Transportation, through Dr. M. L. Harris, Chicago, chairman, was made in THE JOURNAL, April 22, and showed that the rates were the best that the Association has ever secured.

COST OF ROUND TRIP.

To Portland, Oregon, going via any regular direct route, returning via same or any other regular direct route: From Missouri River points; Sioux City, Iowa; Omaha, Neb.; Kansas City, Mo.; St. Paul and Minneapolis, $45.00; From Chicago, $56.50. From St. Louis, $52.50. From New Orleans, $62.50.

To Portland, going via any regular direct route, returning via San Francisco or San Francisco and Los Angeles, and regular direct routes therefrom, or vice versa: From Missouri River points, $56.00. From St. Paul, $63.00. From Chicago, $67.50. From St. Louis, $63.50. From New Orleans, $71.00.

From all points east of Chicago and St. Louis, the rate will be one fare plus $1.00 added to the rates above given. The Missouri Valley is taken as a basis and is the junction between western and eastern passenger associations. The western associations make a fixed rate to Missouri River points; the eastern associations make a rate of one fare plus $1.00. Thus: Atlanta, Ga., $71.50; Boston, $79.50; New York City, $74.50; Washington, $73.00.

DATES TICKETS WILL BE SOLD.

These tickets will be on sale June 13, 14, 15, 19, 23, 24, 27, 28, 29, 30, July 1, 2, 3, 6, 7 and 8. These days apply to the points above mentioned. For points east of Chicago and St. Louis the date of sale will be advanced sufficiently to enable passengers to reach the points mentioned on any of the days specified. Tickets will be good for ninety days from date of sale, but not later than Nov. 30, 1905.

STOPOVERS.

Going passage must begin on date of sale and must be continued up to first Colorado, Wyoming, Texas or Montana point en route and up to Alliance, Neb., Ft. Williams, Ont., and St. Paul, on Nor. Pac. Ry. West thereof stopovers may be made at any point, going or coming, within final limit of ticket.

Returning stopovers will be allowed within final limit at any point west of the points mentioned above. While conditions governing stopovers are not complicated, they vary somewhat and had best be learned of the agent by each purchaser at the time tickets are purchased and of the joint agent at Portland, who has to stamp each excursion ticket to make it good for the return trip.

ROUTES TO THE PORTLAND SESSION.

Map of the Western Country and the Various Routes by Which to See Its Beauties.

DIRECT AND INDIRECT ROUTES.

We may class the various routes to Portland as direct and indirect, the former being all those on which the short-line rate will prevail, the indirect those which will carry the traveler a round-about route but at an additional railway fare The latter, for example, permit the passenger for Portland to travel through California either going or returning, the other part of the trip to be by one of the direct lines. The principal routes are shown on the accompanying map.

By the direct routes, Chicago, St. Louis and Memphis passengers for Portland, or parties from points in the East or South ticketed through either of these three gateways, may, at their option, be routed through St. Paul and Minneapolis and thence to Portland via either the Canadian Pacific, the Great Northern or the Northern Pacific railways; or through Omaha or Kansas City, thence through Denver or Cheyenne and Salt Lake City, thence via Ogden, Utah, and Pocatello, Idaho (not via California from Ogden); or through Omaha or Kansas City and thence via Billings, Mont.

Without extra fare, the western or outgoing trip may be made by any of these so-called direct routes and the return by the same or any other of the direct routes; or one way may be by one of the indirect routes, as said above, by paying an additional charge, but the desired route must be determined on before buying the ticket so that the latter may be made out accordingly.

DIRECT ROUTES VIA ST. PAUL.

Tickets may be routed over any one of the lines between Chicago and St. Paul at the passenger's option, these being the Northwestern Line; the Chicago, Milwaukee and St. Paul; the Chicago, Burlington and Quincy; the Wisconsin Central; the Chicago, Rock Island and Pacific; the Illinois Central, and the Chicago Great Western. After reaching St. Paul the traveler via this gateway has choice of but three routes from there to Portland, the Great Northern, the Northern Pacific or the Canadian Pacific.

DIRECT ROUTES VIA OMAHA.

The railway lines that connect Chicago and St. Paul, noted above, also operate between Chicago and Omaha. The Burlington also offers its own line to Billings, Mont., from which point its trains run to Seattle over the Northern Pacific Railway. The Chicago, Union Pacific and Northwestern Line has a daily service direct from Chicago to Portland without change.

Passengers using any other of the Chicago-Omaha lines may be ticketed to travel via any of the lines west from Omaha, at their option, these lines being the Burlington, the Rock Island and the Union Pacific. Each of these affords excellent service between Omaha and Portland via Denver and Salt Lake City, via Denver and Cheyenne and Salt Lake City, or via Cheyenne direct (main line of Union Pacific); or via Billings, Mont. From Denver to Portland the passenger has the further choice of traveling to Portland via either the Denver and Rio Grande, the Colorado Midland or the Union Pacific, via Salt Lake City, Ogden and Idaho.

DIRECT ROUTES VIA KANSAS CITY OR ST. JOSEPH.

Between St. Louis and Kansas City or St. Joseph similarly excellent service to that via St. Paul or Omaha is offered by the following lines: Chicago and Alton; Chicago, Burlington and Quincy; Missouri Pacific; Chicago, Rock Island and Pacific, and the Wabash.

Between Chicago and Kansas City the same lines operate—except the Missouri Pacific—and in addition the Santa Fe, the Chicago, Milwaukee and St. Paul, and the Chicago Great Western.

From either point Portland passengers may travel via the Kansas City or St. Joseph gateway, if preferred, then through Denver, Salt Lake City and Ogden, Cheyenne and Ogden, or through Billings. Such routings will be, beyond Denver, by one of the lines noted above under Omaha routings through Denver, etc. For that portion of the journey between Kansas City and Colorado, one has choice between the Burlington, the Rock Island, the Santa Fe, the Missouri Pacific and the Union Pacific, the first three having their own lines from Chicago to Denver via Kansas City, the first two and the Missouri Pacific their own lines from St. Louis to Denver via Kansas City.

INDIRECT ROUTES.

These are the routes by which the Portland passenger is carried through California either on the outgoing or on the return portion of the trip, an extra fare being charged therefor, with the requirement that the other portion of the trip shall be by one of the direct routes. All the indirect routes lead through California, and may be by boat or rail between Portland and San Francisco; and from the latter city the route may be eastward across Nevada and through Ogden, thence via any of the lines mentioned under direct routes, to destination; or from San Francisco the ticket may read via southern California, and to destination by any of the southern lines—the

Santa Fe, the Rock Island, and the Southern Pacific. The former runs via the San Joaquin Valley and Mojave, then through Arizona and Albuquerque, N. M., the latter either by the San Joaquin Valley or its Coast Line to Los Angeles and El Paso, and on to New Orleans; the Rock Island runs via Los Angeles, using Southern Pacific tracks to El Paso, whence it takes a northwesterly course through southern New Mexico to eastern termini. Further optional routes are available east of El Paso, if the passenger prefers to travel through Fort Worth, San Antonio or Dallas, thence via any of the numerous lines through St. Louis, Kansas City or Chicago. Tickets routed through New Orleans may be over any of the several lines north and east of that city, at the option of the passenger.

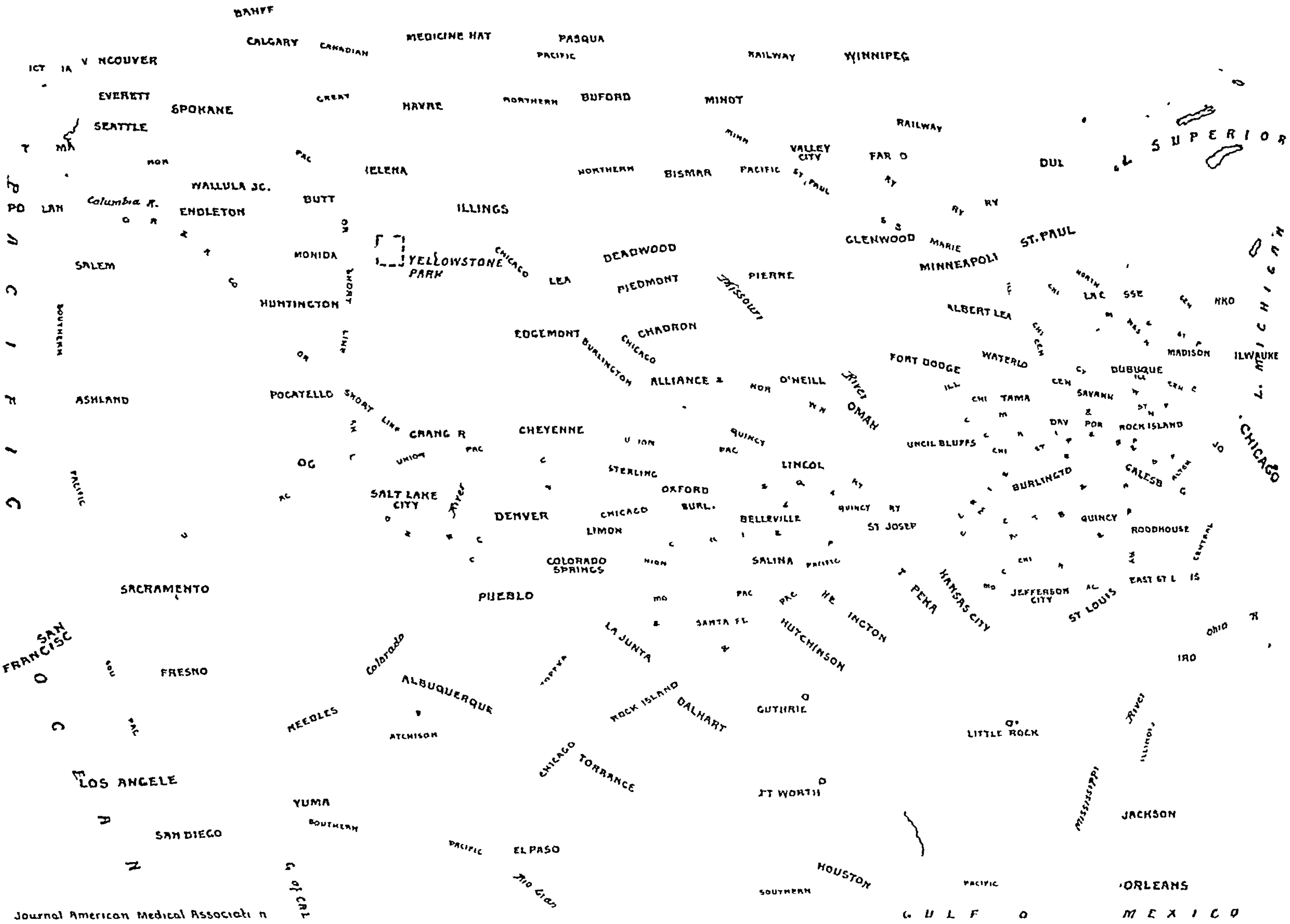

Fig. 16.—Map of the various western routes to and from Portland.

DETAILS OF THESE ROUTES.

The above summary is abstracted from an article in THE JOURNAL, April 22, which described the scenic attractions of the various routes referred to, and discusses the places at which stopovers could be made with pleasure and profit. In addition, members are reminded that all the railroad companies mentioned will be glad to send booklets descriptive of their roads and the territory passed through and to advise about itinerary.

THE SOO-PACIFIC ROUTE.

In the article referred to above, the "Soo-Pacific route" was not explained. The traveler over this line will go from St. Paul and Minneapolis over the Minneapolis, St. Paul and Sault Ste. Marie Railway, through North Dakota and Canada, to the main line of the Canadian Pacific, and on that line across the mountains. The Canadian Pacific is reached at Pasqua, near the center of the Province of Assiniboia, Canada, and it may surprise the one who has not recently looked at a map to learn that on reaching this point the traveler from St. Paul has already gone more than half way to the coast. This emphasizes the immense area of the state of North Dakota, cornerwise through which state is a considerable portion of this particular portion of the Soo line. Here roll the vast prairies of the Dakotas, here roams herd after herd of cattle, which will later go to Chicago to feed the world; here stretch miles of the finest wheat fields. Nearer St. Paul one passes through part of the lake region of Minnesota, where delightful stops for fishing trips may be made. These charming little lakes, set in between the green Minnesota hills, each with its little group of summer hotels, are famous for their fish and their scenery. It may also be noted that Minnesota is the world's largest producer of flax. Canada, this side of the Rockies, is as level as are our own western plains, and when the Canadian Rockies are reached, the contrast between their rugged scenery and the level contour of the land seen the day before is most entertaining. Higher and higher winds the train and more abruptly break the rocky chasms. The scenery on the Canadian Pacific is said to surpass that of the Alps, and we note with interest that several of the trains mentioned below are to stop for several hours or for a whole day at several of the most striking spots in the Canadian Rockies. Banff, Laggan, Field, Glacier—words fail in attempting to describe the stupendous character of the scenery, its marvelous variety of shade and color, the endless details that grow on one as one gazes in awe.

Although it is most pleasant that the arrangements for the Portland trip allow a return by a different route, so that a great variety of scenery may be seen, many a traveler expresses the desire to sit in silence and gaze on Mt. Stephen or down the Illecillewaet River valley, loth to be hurried on from such a wonderful view by the steed of steel. There is an indescribable added grandeur—richness—atmosphere—in leaving the railroad and all of man's marks behind and climbing off where only untouched nature remains. The opportunity for this is afforded by the brief stops that are made on many of the following trips.

SPECIAL TRAINS TO PORTLAND.

Abundant Accommodations for Through Service to Portland in Good Company.

In arranging the itinerary of a trip through the beautiful scenery of the West by some of the various routes mentioned above the physician is offered many special trains. The particular advantages of these are, first, the through service (that is, no change of cars is necessary), and second, the companionship of members of the profession, perhaps acquaintances, on the journey. The physician who does not find the arrangements that he desires among these special trains can go on the regular trains of the routes desired, although most of such trains will require change of cars. Some roads run sleepers through to Portland, and information should be received from the particular road concerned.

We mention below the essential details as to the time of starting of these trains and cars as far as the information has come to our notice. Arrangements may be made for other special trains. In accordance with the announcement in The Journal, May 13, page 1547, we publish below the lists which have been sent us of those who have made reservations on these special trains. It will be understood that many others have not yet definitely decided as to the time of departure, etc., and that their names are not included. Especially is the matter unsettled in the case of the trains which leave late and go through without stopovers. Errors in names may have occurred, due to transcribing of names by railroad clerks and others.

New England.

New England Special.—Special cars to accommodate members of the A. M. A. Outing Club and others from New England will probably leave Boston, June 27, for a trip of four weeks or more over the Chicago, Milwaukee & St. Paul and the Northern Pacific railroads, stopping five and one-half days at Yellowstone Park, and returning from Portland by the Canadian Pacific to Montreal, making short stops in the Canadian Rockies. A different return route may be used. The party can be joined at any point en route. Address for particulars, Dr. E. R. Campbell, Bellows Falls, Vt.

New York and Philadelphia.

New York and Philadelphia Special.—This train will leave New York City at 6:55 p. m. and Philadelphia at 7:50 p. m. Saturday, June 24, for a forty-day trip to Portland and return, stopping six and one-half days at Yellowstone Park, and passing through San Francisco, Los Angeles, Salt Lake City, Denver and Niagara Falls on the return, reaching the starting points, Thursday morning, August 3. This trip will include visits to the Royal Gorge, Manitou, Pike's Peak, Cripple Creek, Garden of the Gods, the famous Georgetown Loop, a day in Chicago, etc. This party is limited to one hundred and twenty-five persons, and at our last advice a few reservations only were still unspoken for. Further information may be secured from Dr. Frederick Holme Wiggin, 55 West Thirty-sixth street, New York, or Dr. Cyrus Lee Stevens, Athens, Pa.

The following is a list of those who have made definite reservations on this train:

Dr. and Mrs. Dexter D. Ashley,	New York City.
Dr. J. Riddle Goffe	New York City
Dr. and Mrs. John T. Nagle and sister-in-law	New York City.
Dr. Thomas F. Reilly	New York City
Dr. E. Franklin Smith	New York City
Dr. and Mrs. J. P. Tuttle	New York City
Dr. and Mrs. Wisner R. Townsend and the Masters Townsend	New York City
Dr. Frederick Holme Wiggin *and* Son	New York City
Dr. and Mrs. L. Grant Baldwin	Brooklyn, N. Y.
Dr. William Francis Campbell	Brooklyn, N. Y.
Dr. Mary E. Dunning	Newburgh, N. Y.
Miss Hill	Newburgh, N. Y.
Dr. and Mrs. C. E. Townsend	Newburgh, N. Y.
Dr. Eugene Baker	Ithaca, N. Y.
Dr. J. Orley Stranahan	Rome, N. Y.
Dr. C. E. Cuddeback	Port Jervis, N. Y.
Mr. and Mrs. Charles Landell	Bayonne, N. J.
Dr. and Mrs. Forman	Bayonne, N. J.
Dr. and Mrs. J. Fewsmith and Miss Fewsmith	Newark, N. J.
Messrs. G. Gilbert and Alan H. Brown	Newark, N. J.
Dr. and Mrs. E. Hollingshead	Pemberton, N. J.
Mrs. Price	Pemberton, N. J.
Miss Allan	Pemberton, N. J.
Dr. and Mrs. Marcus F. Squier	Harrison, N. J.
Dr. Frank W. Stevens	Bridgeport, Conn.
Dr. and Mrs. William Witter	Norwich, Conn.
Dr. and Mrs. C. L. Stevens	Athens, Pa.
Dr. E. W. Evans	Easton, Pa.
Dr. and Mrs. J. G. Zern	Lehighton, Pa.
Dr. John Welsh Croskey	Philadelphia, Pa.
Dr. J. V. Kelly	Philadelphia, Pa.
Dr. M. H. Russell	Philadelphia, Pa.
Dr. D. D. Custer	Philadelphia, Pa.
Dr. H. K. Regar	Philadelphia, Pa.
Dr. and Mrs. J. W. Ellenberger	Harrisburg, Pa.
Mr. Ellenberger, Jr.	Harrisburg, Pa.
Dr. and Mrs. I. C. Gable	York, Pa.
Mr. Gable, Jr.	York, Pa.
Dr. and Mrs. Holtzapple	York, Pa.
Miss " "	York, Pa.
Mr. " "	Spring Grove, Pa.
Mr. " "	Spring Grove, Pa.
Dr. and Mrs. S. L. Wiggin	McKeesport, Pa.
Dr. and Mrs. O. F. Kistler and niece	Wilkesbarre, Pa.
Dr. and Mrs. Frederick Baldwin	Danvers, Mass.
Dr. F. H. Thompson and friend	Fitchburg, Mass.

Indianapolis.

Indiana State Medical Society.—Sleeping cars will leave Indianapolis on the Pennsylvania lines June 30, 11:50 p. m., and will join the Yellowstone Park Special (for further particulars of which see below) leaving Chicago 11 a. m., July 1. Leaving Portland, July 17 the return will be over the Northern Pacific to Seattle, Canadian Pacific steamer to Vancouver, and home by the Canadian Pacific, the Soo Line, the Burlington route and Pennsylvania lines consecutively; with stopovers at Seattle, Victoria, Vancouver, Glacier (24 hours), Banff, Canadian National Park (24 hours). The return, however, may be made by any other route desired. For further particulars, address Dr. Frank B. Wynn, Newton Claypool Bldg., Indianapolis. The following have made definite reservations:

Dr. W. N. Wisbard *and wife*	Indianapolis
T. B. Eastman and wife	Indianapolis
H. O. Pantzer and wife	Indianapolis
Dr. A. E. Stearne and wife	Indianapolis
Frank B. Wynn and wife	Indianapolis
F. C. Heath and wife	Indianapolis
C. E. Ferguson and wife	Indianapolis
John L. Freeland and wife	Indianapolis
W. H. Ristine and wife	Crawfordsville
L. J. Willien	Terre Haute
J. T. Freeland and wife	Bedford
M. G. Moore, wife and son	Vincennes
W. S Williams and wife	Kendallville
C. D. Kimball and wife	Kendallville
J. W. Cook and wife	Pendleton
J. H. Green and wife	North Vernon
Jennie H. Smith	Greencastle
Flora Lammers and daughter	Greencastle

Nashville.

Special cars are to leave Nashville, Tenn., July 4, to reach Portland July 10, passing through St. Louis, Denver and Salt Lake City, and returning by the Yellowstone Park and St. Paul. There will be stopovers in Colorado and at Salt Lake City. Address for further particulars Dr. G. C. Savage, Nashville, Tenn. The following are planning to go:

Dr. and Mrs. J. A. Witherspoon	Nashville, Tenn.
Dr. and Mrs. J. T. Altman	Nashville, Tenn.
Dr. W. A. Bryan	Nashville, Tenn.
Dr. Louis Leroy	Nashville, Tenn.
Dr. G. C. Savage and daughter	Nashville, Tenn.
Dr. and Mrs. E. A. Cobleigh	Chattanooga, Tenn.
Dr. Holtzclaw	Chattanooga, Tenn.
Dr. C. A. Abernathy	Pulaski, Tenn.
Dr. Shields Abernathy	Pulaski, Tenn.
Dr. J. Ross Snyder *and three confrères*	Birmingham, Ala.
Dr. and Mrs. A. W. Calhoun	Atlanta, Ga.
Dr. and Mrs. Floyd W. McRae	Atlanta, Ga.
Dr. and Mrs. W. D. Haggard	Nashville, Tenn.
Dr. and Mrs. M. E. Aldersen	Russellville, Ky.
Dr. Piper	Russellville, Ky.
Dr. C. N. Clarke	Mount Pleasant, Tenn.
Dr. Hazel Padgett	Columbia, Tenn.

Michigan.

Michigan State Medical Society Special.—Those who take this train will leave all Michigan points Monday, July 3, *in time to* take the special at Chicago, which leaves at 5:30 p. m. over the C. R. I. & P. Railroad for St. Paul the Soo Line (referred to elsewhere) and the Canadian Pacific, stopping at several points in the Canadian Rockies. Between Vancouver and Seattle the trip will be made on the Canadian Pacific Railway Steamer. No fixed return itinerary is planned. For further particulars address Dr. F. W. Robbins, 73 Cass Ave., Detroit. Those who have thus far made reservations are as follows:

Dr. Willis Anderson............................Detroit
Dr. and Mrs. Chas. T. McClintock............Detroit
Dr. and Mrs. F. W. Robbins.................. Detroit
Dr. Walter P. Manton and family (5)........Detroit
Dr. W. R. Chittick ....Detroit
Prof. F. L. Bliss............................. Detroit
Dr. F. D. Wheeler..............................Detroit
Dr. Wm. J. Stapleton, Jr......................Detroit
Dr. and Mrs. O. H. Lau........................Detroit
Miss Davis....................................... Detroit
Miss Kenseth.................................... Detroit
Dr. and Mrs. D. R. Clark....................Dearborn
Dr. M. G. Day.............................Ann Arbor
Miss Alice Anthony....................Bryn Mawr, Pa.
Dr. W. F. Dodge and family (6)..........Big Rapids
Dr. W. L. Godfrey.....................Battle Creek
Dr. W K. West.................................Calumet
Mrs. and Miss Lawbaugh.....................Calumet
Geo. A. Robbins, Esq..........................Chicago
Miss E. M. Palmer.............................Chicago
Dr. R. H. McMullen and family (4)..........Cadillac
Dr. and Mrs. Collins H. Johnston........Grand Rapids
Dr. A E. Savage................................Gowen
Dr. and Mrs. G. M. Livingston............Manistique
Dr. and Mrs. Phil H. Quick....................Olivet
Miss Quick ....Olivet
Mrs. and Miss Ely..............................Olivet
Miss Hasford ....Olivet
Dr. and Mrs. Chas. B. Stockwell.........Port Huron
Dr. and Mrs. Mortimer Willson............Port Huron
Family of Dr. Willson (2)..................Port Huron
Dr. and Mrs. M. S. Coyer.................Philadelphia
Dr. James Yates.............................Roseville
Miss Lapsley .... Roseville
Dr. and Mrs. H. V. Brooks....................Saginaw
Dr. and Mrs. E. E. Curtis.....................Saginaw
Miss Coleman .... Saginaw

Chicago.

Yellowstone Park Special.—This train will be in two sections, both running over the Chicago, Burlington and Quincy Railroad to Minneapolis, thence by the Northern Pacific to Portland, stopping at Yellowstone Park. The first section will leave Chicago, June 30, will reach Yellowstone Park July 2, and will reach Portland on the morning of July 10. The second section will leave Chicago July 1, reach the Park July 3, and will reach Portland on the afternoon of July 10. Each of these trains will accommodate but one hundred and twenty-five persons, and the reservations are almost all spoken for. For further particulars address Mr. F. E. Bell, City Passenger Agent, Burlington route, 211 Clark street, Chicago.

The following have definitely reserved accommodations for themselves and those who will go with them. (In many cases we are not informed as to the number in the party.)

FIRST SECTION JUNE 30.

..............................York, Pa.
Dr. Wm. F. Bacon (2) ....Kenton, Ohio
Dr. and Mrs. F. D. Bain ....Dayton, Ohio
Dr. and Mrs. John S. Beck ....Cincinnati
Dr. and Mrs. Henry W. Bettmann............Cincinnati
Dr. C. L. Bonifield ....Springfield, Ill.
Dr. C. M. Bowcock (4)..............Independence, Iowa
Dr. R. E. Buchanan ....Boston
Dr. Henry A. Christian ....Chicago
Will C. Braun ....Chicago
Dr. N. S. Davis ....Aurora, Ill.
Dr. F. M. Elliott ....
Dr. and Mrs. J. Harvey Fronfield and daughter (3)....
....Media, Pa.
....Pittsburg
Dr. and Mrs. W. S. Foster ....Norfolk, W. Va.
Dr. and Mrs. Chas. R. Grandy ....Dayton, Ohio
Dr. and Mrs. George Goodhue ....Dubuque, Iowa
Dr. and Mrs. J. R. Guthrie ....Ithaca, N. Y.
Dr. Elma Griggs (2) ....So. Fork, Pa.
Dr. J. H. Glass ....Buffalo, N. Y.
Dr. Benj. H. Grove ....Logansport, Ind.
Dr. Robert Hessler ....Jacksonville, Ill.
Dr. and Mrs. J. W. Hairgrove ....Cincinnati, Ohio
Dr. M. L. Heidingsfeld ....Darlington, Wis.
Dr. and Mrs. C. F. Lehnkering ....Cincinnati, Ohio
Dr. Joseph Lowe ....Pittsburg, Pa.
Dr. A. M. McKibben ....New York
Dr. M. Manges (2).............................Monmouth, Ill.
Dr. E. L. Mitchell ....Riverton, N. J.
Dr. and Mrs. A. Marcy, Jr....................Riverton, N. J.
Miss Hannah Marcy.............................Riverton, N. J.
Miss Lenora Wright ....No. Andover, Mass.
Dr. C. P. Morrell ....Boston, Mass.
Dr. H. O. Marcy and son (2)...................Meredosia, Ill.
Dr. F. A. Neville ....Philadelphia
Dr. Maurice Ostheimer ....Janesville, Wis.
Dr. and Mrs. J. F. Pember and 2 friends..Janesville, Wis.
....Aurora, Ill.
Dr. J. A. Pratt ....New York
Dr. M. L. Rhein ....Chicago
Dr. B. L. Riese and mother (2).................Kenton, Ohio
Dr. Jesse Snodgrass ....
Dr. F. C. Swan (3) ....So. Chicago, Ill.
Dr. F. Schill, Jr..........................Johnstown, Pa.
Dr. J. A. Tuthill ....Le Roy, Ill.
Dr. L. C. Taylor ....Springfield, Ill.
Dr. R. C. Teschan (2)...................Milwaukee, Wis.
Dr. C. O. Thienhaus ....Milwaukee, Wis.
Dr. W. C. Watson ....Lima, Ohio
Dr. and Mrs. E. F. Woods ....Janesville, Wis.
Dr. and Mrs H. G. Wilbur...............Fall River, Mass.
Dr. D. I. Wolfstein ....Cincinnati, Ohio
Miss Westfall ....Dayton, Ohio
Dr. Silver ....New York
Dr. R. S. Yarros and party.......................Chicago
Dr. Cook ....Chicago

SECOND SECTION, JULY 1.

A. Alguire ....Belvidere, Ill.
M. K. Allen ....Louisville, Ky.
Dr. and Mrs. Frank T. Andrews, mother and son (5)..
....Chicago
Dr. Robert C. Bourland ....Rockford, Ill.
Dr. and Mrs. J. Frederick Herbert.......Philadelphia
Dr. Chas. H. Emery (2) ....Bedford, Ind.
Dr. W. R. Fringer ....Rockford, Ill.
Dr. and Mrs. J. Frederick Herbert ....Philadelphia
Dr. D. S. Hanson ....Cleveland, Ohio
Dr. J. A. Johnston and sister (2)........Cincinnati, Ohio
Dr. Wm. E. Lower ....Cleveland, Ohio
Dr. W. P. Long ....Weatherly, Pa.
Dr. and Mrs. Geo. E. Malsbary ....Cincinnati
Dr. W. N. Pringle ....Johnstown, Pa.
Dr. Julia Riddle ....Oshkosh, Wis.
Dr. John U. Riggs ....Bryan, Ohio
Dr. D. G. Smith and party ....Elizabeth, Ill.
Dr. J. S. Stribling.........................Seneca, S. C.
Dr. and Mrs. Schuman.............Columbia City, Ind.

(Three cars of this train are being filled with Ohio and Indiana physicians and their friends.)

Chicago Medical Society Special.—This train will leave Chicago July 6 at 7:30 p. m., and will arrive at Portland at 8 a. m., Monday, July 10, passing over the Chicago, Milwaukee and St. Paul and the Northern Pacific railroads. Stopover points include St. Paul, Spokane and points in the Rockies and Cascades. This train will be a luxurious on, with compartment car, observation car and other sleepers, as well as a dining car, which remains on the train throughout the trip. It will be noted that this train starts only in time to reach the Portland session, and the return trips of those who go by this train may be made by various routes, according to the time at each one's disposal. Address for particulars the secretary of the society, Dr. F. X. Walls, 103 State street, Chicago, or Mr. C. A. Matthews, general agent, passenger department, Northern Pacific Ry. Co., 208 S. Clark St., Chicago.

The following have made reservations:

MINNEAPOLIS.

Dr. C. W. Bishop.
Dr. W. A. Hall.
Dr. R. S. Brown.
Dr. J. H. Stuart and wife.
Dr. H. H. Kimbal and wife.
Dr. Edw. Estabrook.
Dr. C. M. Kistler.
Dr. Wm. B. Murphy.
Dr. H. M. Orton.
Dr. A. Soderling.
Dr. C. D. Whipple.
Dr. C. B. Wright.
Dr. E. J. Brown.
Dr. H. A. Cohen.
Dr. W. S. Laton.
Dr. J. D. Simpson.
Dr. A. M. Wang.
Dr. C. G. Weston.

CHICAGO.

Dr. W. C. Abbott (2).
Mr. S. DeWitt Clough (2).
Dr. Frank X. Walls (2).
Dr. W. F. Waugh (2).
Dr. Stemmel, Macomb, Ill.
Dr. Wilson (2).
Dr. M. L. Harris (2).
Dr. C. R. Ogden (2).
Dr. Pennington (2 or 3).

Special Overland Limited Train.—This is one of the quickest trains to Portland. It will leave Chicago Thursday, July 6, at 8:02 p. m., and will reach Portland Sunday, July 9, at 5:25 p. m. This train passes over the Chicago and Northwestern and the Union Pacific railroads, the Oregon Short Line, and the Oregon Railroad and Navigation Co.'s line through southwestern Idaho, the Blue Mountains and Columbia River country. Dr. Lewis S. McMurtry is arranging a party which will spend six days in Yellowstone Park on the return trip. Address for further particulars the nearest member of the committee on arrangements or Mr. H. A. Gross, General Passenger Agent, Chicago and Northwestern Railroad, 212 Clark Street, Chicago. The committee of arrangements is as follows: S. C. Stanton, M.D. 1604, 59 State St., Chicago; Heinrich Stern, M.D., 56 E. 76th St., New York City; Lewis S. McMurtry, M.D., Louisville, Ky.; Wm. Warren Potter, M.D., Buffalo, N. Y.; Florus F. Lawrence, M.D., Columbus, Ohio; Simon P. Scherer, M.D., Indianapolis; Charles A. L. Reed, M.D., Cincinnati.

On this same route is operated a daily through train to Portland on the same fast schedule. For particulars address Mr. Gross as above.

Scenic Line Special.—This train will leave Chicago at 10 p. m., Thursday, July 4, and will reach Portland Monday, July 10, in the afternoon, running on the Burlington route, Denver and Rio Grande, Oregon Short Line, and the Oregon Railroad Company's Navigation Lines, and will stop for sight seeing at Colorado Springs, Glenwood Springs and Salt Lake City. This train will go through the Royal Gorge, Tennessee Pass and other points on the famed Denver and Rio Grande line. Passengers may return from Portland by any route they desire. For information address Mr. F. E. Bell, City Passenger Agent, Burlington Route, 211 Clark street, Chicago.

Gates' Tour.—Ophthalmology Special.—The officers and a number of the members of the Section on Ophthalmology and some members of the Section on Laryngology and Otology plan to go to Portland in a special car run by the Gates' Tour excursion. This will leave Chicago Monday, July 3, at 10 p. m., by the Chicago and Northwestern Railway, and from Minneapodis on will run over the Soo Line (referred to elsewhere) and the Canadian Pacific. Stops will be made at Banff, Field, Glacier, etc. The return may be by the Northern Pacific and Yellowstone Park, or otherwise. Further information may be had of Chas. H. Gates, 419 Madison street, Toledo, Ohio. Those of the party who have already made reservations are as follows:

Prof. J. Hirschberg	Berlin, Germany.
Dr. and Mrs. C. R. Holmes	Cincinnati
Dr. and Mrs. Arthur E. Bulson	Fort Wayne, Ind.
Dr. Robert C. Myles and family	New York City
Dr. and Mrs. H. V. Würdemann	Milwaukee, Wis.
Dr. and Mrs. J. E. Weeks	New York City
Dr. S. D. Risley	Philadelphia
Dr. and Mrs. Geo. K. Swinburne	New York City
Dr. and Mrs. T. W. Moore	Huntington, W. Va.
Dr. and Mrs. W. C. Chapman	Toledo, Ohio
Dr. and Mrs. W. H. Snyder	Toledo, Ohio
Dr. and Mrs. Jas. A. Duncan	Toledo, Ohio
Dr. S. B. Hiner	Lima, Ohio
Dr. J. A. Kimmell	Findlay, Ohio
Dr. W. S. Bryant	New York City
Dr. and Mrs. E. B. Dench	New York City
Dr. W. Campbell Posey	Philadelphia
Dr. W. Zentmayer	Philadelphia

St. Louis.

Two parties will go from St. Louis over the Burlington Route and the Northern Pacific Railroad, one leaving St. Louis June 27 and visiting the Yellowstone and Puget Sound on the out trip, the other leaving July 6 and going direct to Portland. Reservations may be made by addressing Dr. T. A. Hopkins, 319 Century building, St. Louis.

So far as known, those who expect to go on this trip from St. Louis are as follows:

Dr. H. A. Auler.
Dr. J. H. Amberland and wife.
Dr. Frances L. Bishop.
Mr. G. R. Blickhahn and wife.
Dr. I. H. Cadwallader.
Dr. W. B. Dorsett.
Dr. W. L. Dickerson and wife.
Dr. O. H. Elbrecht.
Dr. Pinckney French.
Dr. J. P. Hennerich.
Dr. Roland Hill.
Dr. J. H. Tanquary and wife.
Dr. C. H. Hughes.
Dr. J. M. Long.
Dr. J. R. Lemen.
Dr. F. J. Lutz.
Dr. L. H. Laidley.
Dr. A. R. Kieffer and wife.
Dr. C. M. Nicholson.
Dr. Wm. Porter.
Dr. W. H. Stauffer.
Dr. R. E. Schlueter.
Dr. B. E. Stockwell.
Dr. F. G. Taussig.
Dr. T. A. Hopkins.
Dr. Meyer Wiener.
Dr. Brandford Lewis and wife.

Kansas City, St. Joseph and Omaha.

Party No. 1 will leave Kansas City Thursday evening, June 29, at 6:10 p. m.; St. Joseph, 8:25 p. m.; Omaha, 11:10 p. m.; and Lincoln Friday, June 30, at 1:20 a. m. This party will arrive in Yellowstone Park Saturday morning, July 1, will remain there about six days, and will reach Portland Sunday evening, July 9.

Party No. 2 will leave Kansas City, St. Joseph, Omaha, etc., on the evening of July 5 and go direct to Portland. The return trip may be by various routes. These trains will go by the Burlington route. For further particulars address Dr. John Punton, 532 Altman Bldg., Kansas City, Mo., or Dr. Chas. Wood Fassett, St. Joseph, Mo.

The Kansas City reservations on this train are as follows:

Dr. John Punton and wife	Kansas City, Mo.
Dr. S. C. James and wife	Kansas City, Mo.
Dr. William Frick and wife	Kansas City, Mo.
Dr. E. Armstrong	Greenleaf, Kansas
Dr. F. D. Morse	Lawrence, Kansas
Dr. C M. Castle	Wymore, Neb.

Following is a list of those already booked:

Dr. and Mrs. R. C. Moore and daughter	Omaha
Dr. W. O. Bridges	Omaha
Dr. and Mrs. B. F. Crummer	Omaha
Dr. and Mrs. A. A. Ashby	Red Oak, Iowa
Dr. and Mrs. J. M. Knott and two	Sioux City, Iowa
Dr. S. F. Sanders and daughter	Holdredge, Neb.
Dr. W. B. Kern	Hastings, Neb.
Dr. C. S. Chamberlain and daughter	Cincinnati
Dr. C. A. Dannaker	Kansas City
Dr. John Punton	Kansas City
Dr. Dora Greene-Wilson	Kansas City
Dr. T. H. Doyle	St. Joe
Dr. and Mrs. Chas. Wood Fassett	St. Joseph
Dr. L. W. Shannon and sister	Hiawatha, Kan.
Dr. and Mrs. I. N. Picket	Odell, Neb.
Dr. Hugh B. Coffey	Pittsburg, Kan.
Dr. and Mrs. F. M. Daily	Beloit, Kan.

Des Moines.

A special Iowa car will leave Des Moines at noon, June 30, Omaha at 11:20 p. m., reaching Yellowstone Park on the morning of July 2. After six days the party will leave for Portland and will arrive July 10.

The second car will leave Des Moines July 6, and will join the first car above mentioned at Yellowstone Park and both will go on to Portland together. Both cars will traverse the Burlington route by way of Billings and the Northern Pacific. No fixed return route is planned. Address Dr. J. W. Cokenower, Des Moines, Iowa.

St. Paul and Minnesota.

Minnesota Societies' Special.—The special train of the Minnesota State Medical Society, the Minnesota Academy of Medicine, the Ramsey County Medical Society, and the Hennepin County Medical Society, will leave St. Paul, June 29, at 10 p. m., and Minneapolis at 10:30 p. m., reaching Yellowstone Park July 1, and leaving July 6, arriving at Portland July 9 about 6 a. m. The trip will be over the Northern Pacific Railroad. Further particulars may be obtained of C. F. McNeill, C. P. & T. A., Northern Pacific Railway, Minneapolis, or Geo. D. Rogers, C. P. & T. A., Northern Pacific Railway, St. Paul.

Dr. C. A. Erdman	Minneapolis
Dr. H. M. Workman	Minneapolis
Dr. A. W. Abbott	Minneapolis
Dr. and Mrs. W. A. Jones	Minneapolis
Dr. and Mrs. W. J. Byrnes	Minneapolis
Dr. and Mrs. J. W. Little	Minneapolis
Dr. and Mrs. C. Nootnagle	Minneapolis
Dr. and Mrs. J. E. Engstad	Grand Forks, N. Dak.
Dr. Ira W. Bedle	Tracy, Minn.
Dr. R. J. Hubbard	St. Cloud, Minn.
Dr. and Mrs. E. C. Eberlin and daughter	Glenwood, Minn.
Dr. Evans (party of 3)	La Crosse, Wis.
Dr. and Mrs. C. C. Knapp	Zanesville, Ohio

PORTLAND'S HOTELS.

A List of Hotels and Information as to Other Accommodations.

The following hotels have been selected for accommodation as the best out of some 100 hotels and boarding and rooming houses, listed by the Press Bureau of the Lewis & Clark Fair:

Hotel Portland, Sixth and Morrison, European plan, $5.00 to $7.00; two in room, $2.50 to $3.50 per person.
The Calumet, Seventh and Alder, $1.50 to $2.00 per room.
Eaton Hotel, Morrison and West Park, $2.00 to $3.00 per room.
Elton Court, Eleventh and Yamhill, $1.50 to $2.00 per room.
Imperial Hotel, Seventh and Washington, $1.50 to $3.00 per room.
Lange Hotel, Sixth and Washington, $1.50 to $2.00 per room.
The Oregon, Seventh and Washington, $1.00 to $3.00 per per room.
The Oxford, Sixth and Oak, $1.00 to $2.00 per person.
The Perkins, Fifth and Washington, $1.50 to $3.00 per person.
The Scott, Seventh and Ankeny, $1.00 to $2.50 per person.
American Inn, Fair Grounds, European, $2.00 to $5.00 per day; American plan, $4.00 to $7.00 per day (includes admission to Fair grounds).
Belvedere, Fourth and Alder, $1.00 to $2.50
The Esmond, Front and Morrison, $1.00 to $2.00.
Grand Central, Third and Flanders, $1.00 to $2.00.
The Merchants, Third and Everett, $1.00 to $2.00.
St. Charles, First and Morrison, $1.00 to $2.00.
Hill Military Academy, Twenty-Fourth and Jarshall, American plan, $3.00 to $3.50.

The Portland Hotel Company has also a large number of rooms outside of the hotel, in private residences and boarding houses, first class in every respect, where guests are cared for in the same manner as are those in the hotels, at a rate of $4.00 to $5.00 per room, two in a room.

The "Exposition Accommodation Bureau," "organized to protect Portland's guests," and under the control of the fair board, have some thousands of rooms in private residences, well selected, first class and comfortable, which they are renting for from $1.50 to $3.00 per room, for either one or two persons. Both the Portland Hotel Company and the "Exposition Accommodation Bureau" are filling the requests of the Committee of Arrangements for reservations on the above terms, thus insuring comfortable quarters at from $1.00 to $2.50 per day, according to rooms.

There are an abundance of restaurants where good meals may be obtained at from 25 cents up.

A bureau of information will be maintained at the Union Depot for the convenience of members on arrival.

The chairman of the committee on hotels is Mr. W. C. Bowers.

Five Thousand for Portland.

The *Medical Sentinel* (Portland, Ore.) says in its May issue: "On May 1 the total number of requests for hotel reservations made to the Committee on Arrangements for the coming meeting of the American Medical Association amounted to 954 rooms. Accommodations have been provided for these as they have been received. Nearly every other man one meets about town, physicians and laymen, tell of preparations for the care of some eastern physician already made. Probably not less than as many more are in this way already provided for. With approximately 2,000 visitors at the American Medical Association already provided with accommodations, two and a half months before the date of the meeting, it is now safe to say that the attendance in Portland will be the greatest in the history of the Association. That there will be not less than 5,000 in attendance seems now positive. The best thing about this is that Portland will be able to care for all who wish to come. Mr. Bowers, who is on the committee, has guaranteed accommodations for 5,000. With the outside help, which is doing its work unrequested and unannounced, in this regard, the committee will not itself be taxed to this amount. The last to request for rooms must, of course, expect to get what is left. Physicians should write for reservations immediately. For instance, Dr. Coffey will care for ten physicians and their families, and others in the profession in proportion to their ability and facilities so to do."

It is gratifying to feel the hearty, hospitable spirit that is shown here and in letters from the officials at Portland. Physicians should assist the committee on entertainment by having accommodations assigned in advance.

MEETING PLACES.

The Sections Will Meet in Unusual Proximity to One Another—Excellent Arrangements.

The meeting places for the various sections are all centrally located; within a few minutes' walk of one another, and of the hotels. The Armory of the Oregon National Guard, Tenth and Couch streets, will be the central point, where will be held the General Meetings and those of the Section on Practice of Medicine and of the Section on Surgery and Anatomy. Here also will be the registration headquarters, the postoffice, the pharmaceutical exhibit, information bureau, free telephone service (local and long distance), etc. The room for the General Meeting will seat 2,500 people. In this same room the Section on Surgery and Anatomy will meet. In the social hall of the same building will meet the Section on Practice of Medicine; this is a spacious room, with a seating capacity of 1,000. Immediately across the street is the Atkinson School building, where some fifteen spacious, well-lighted rooms with seating capacity of from 50 to 250 each have been placed at the disposal of the Committee of Arrangements. Here will be held the meetings of the sections on Obstetrics and Diseases of Women, Pathology and Physiology, Diseases of Children, Cutaneous Medicine and Surgery, Pharmacology, Hygiene and Sanitary Science, and Nervous and Mental Diseases. Here also will be the Scientific Exhibit.

The section on Ophthalmology and the section on Laryngology and Otology will meet in the Hirsch-Selling Building, Tenth and Washington streets, which is only four blocks from the Armory.

The House of Delegates will hold its sessions in the Chamber of Commerce Building, Third and Stark streets, nine blocks from the Armory.

It will thus be seen that the meeting places are compactly arranged. They will prove commodious and comfortable and are only a few minutes' walk from the hotels.

The chairman of the local committee on meeting places is Dr. E. F. Tucker.

REGISTRATION OF MEMBERS.

The registration of members at the annual session is always a simple matter to those who understand what is required.

In the first place, before presenting himself at one of the windows, it is necessary for the physician to fill out a registration card to be found on the tables.

Those registering come under one of three classes: 1, those who have already paid the annual dues for the current year; 2, those who have not paid the dues, and 3, those who join the Association at the session.

1. Those who have paid for the current year have been supplied with a small pocket card, which is also a pocket certificate, to take to the session. This, with the registration card, duly filled out, should be presented at the window, and the badge, program, etc., will be given him at once.

2. Those who have not paid their dues will present the registration cards with the annual dues at a window labeled "cash," and will receive receipts and their badges, programs, etc. (Those who are behind in their dues must pay the back dues as well as those for the current year.)

3. Anyone desiring to join the Association must have a certificate showing that he is a member in good standing of an affiliated association in the state in which he resides. This certificate must be presented with the registration card at the window marked "new members" before the dues are paid at a "cash" window.

COMPLIMENTARY ENTERTAINMENTS.

The Committee on Entertainment has under consideration several special excursions that will enable our visitors to see the most interesting natural scenery accessible within a day's ride of Portland. (In this connection, see the references to Western scenery on preceding pages.)

These excursions will include trolley rides to the most commanding viewpoints on the heights back of Portland (see illustration); a steamboat excursion through the great Columbia River gorge (see illustration); a trip by rail to the ocean, and an evening on the Exposition grounds with special features; these will be free to our guests.

For the excursion on the Columbia River two or three very fine steamers are at the disposal of the committee, each with a carrying capacity of about 500, and in case a greater number wish to go they will be able to secure others. The plan contemplated at present is to go down the Willamette and then up the Columbia to a certain point, and to have a fine luncheon served, and then to return by boat or perhaps by rail. This trip will be a splendid feature of the entertainment.

A special committee will be in charge of the entertainment of the wives and families of visiting members.

THE ALASKA TRIP.

Excursion to Alaska by Steamer After the Session Closes.

There will be a special excursion to Alaska, July 18. This trip is said to be without equal anywhere. It is not an ocean trip in the usual sense, with its many unpleasant accompaniments of seasickness and stormy weather, but rather like a river ride, amid a thousand islands and underneath beetling cliffs and snow-capped mountains, with just an occasional dash of old ocean as the vessel crosses some wider strait. (See illustrations on previous pages.)

Without specifying in particular the various ports of call on the trip, it can be said that all the points of interest on the Alaska route will be touched at between Seattle and Sitka. All applicants for reservations for the trip will be supplied with literature by the steamship company. A round-trip rate of $60 from Seattle has been obtained, and the steamer *Jefferson*, a splendid vessel designed and built especially for this route, will be used. She has spacious social halls and decks, and every modern convenience to make the voyager comfortable. The cuisine is equal to that of the best first-class hotels. The *Jefferson* will leave Seattle at 9 a. m. July 18, and returning, will discharge at Tacoma July 29, thus consuming eleven days in the trip. She will touch at Vancouver on the return trip, and if any of the excursionists desire to visit Victoria they will be given tickets from Vancouver by way of Victoria to Seattle on the company's regular steamers. All intending to make this excursion are requested to send in their applications at once to the Committee of Arrangements, as the number already applying suggests the possibility that they may have to engage a second steamer.

The following quotation from the steamship company's "A Trip to Wonderful Alaska" may be of use in the selection of clothing for the trip: "Making preparations for a tour of southeastern Alaska does not mean that one must provide himself with thick-soled shoes and fur robes. Pack your trunk with summer clothing, wear a Panama hat, and with a light overcoat as a protection in the cool evenings, you are ready to depart on the voyage north."

It might be well to modify this quotation to read "moderately heavy clothing as well as overcoat," and for "Panama hat" read "felt hat" or "traveling cap," though the quotation is given on the authority indicated, and may hold good as a general statement.

HONOLULU AND YOKOHAMA.

Trips to the Hawaiian Islands and to the Orient.

A trip to Honolulu may be arranged. The Pacific Mail Steamship Company will carry fifty excursionists to Honolulu at a round-trip rate of $110 each. The fine steamer *Korea*, said to be equal in all respects to the finest transatlantic steamers, will leave San Francisco July 22, a convenient day for sailing. In view of transpacific travel which must be accommodated, the company limits the number in this party to fifty.

On this same steamer the round-trip rate to Yokohama will be $240; Hong Kong, $270, provided a party of not less than twenty make that trip. Those who are contemplating these trips should write at once to Dr. K. A. J. Mackenzie, chairman of the Committee of Arrangements, Portland, Oregon.

OTHER MEETINGS AT PORTLAND.

Davis Memorial—State Medical Journals' Association—College Alumni.

Announcements are received of the following meetings to be held at Portland in connection with the session of the American Medical Association:

Memorial Meeting to the Late Dr. N. S. Davis.

The American Medical Association and the Society for the Study of Inebriety and Alcohol will hold a memorial service at Portland in commemoration of the life and work of the late Dr. N. S. Davis of Chicago. Dr. Davis will be remembered as one of the founders and most active promoters, as well as president of the American Medical Association, and one of the widest known and most distinguished physicians of this country. He was founder and president for fourteen years of the American Medical Temperance Association. His numerous friends and contemporaries from both societies will unite on this occasion to commemorate his great services to both medicine and science.

This meeting will be held at Portland, Ore., Wednesday evening, July 12, at one of the general meetings of the American Medical Association and will follow the address on "Public Health" in the same hall and place.

The memorial address will be delivered by Dr. Henry O. Marcy, Boston, ex-president of the American Medical Association. Other addresses will be delivered by Drs. J. H. Musser, Philadelphia, and L. S. McMurtry, Louisville, Ky., president and president-elect of the Association, and by Dr. G. W. Webster, Chicago, president of the Illinois State Board of Health; Dr. Winfield S. Hall of Northwestern University, Chicago; Dr. T. D. Crothers, Hartford, Conn.; Dr. John Hollister, Chicago, and Dr. Henry Didama, Syracuse, N. Y. Others will contribute memorial notes of the work and personal influence of Dr. Davis in science and in American medicine.

American Association of State Medical Journals.

The American Association of State Medical Journals will hold its second annual meeting in the parlor of Hotel Portland, Portland, Ore., Tuesday afternoon, July 11, at 4 o'clock.

Papers on medical advertising will be read by Drs. George H. Simmons, Secretary of the American Medical Association; Philip Mills Jones, secretary-editor, California State Medical Association, and E. Eliot Harris, chairman of the committee on legislation, New York State Medical Association; and on "The Function of the State Medical Association Journal," by Dr. James B. Bullitt, secretary-editor, Kentucky State Medical Association. "The Possibilities from a Business Standpoint of Concerted Action on the Part of State Medical Journals" will be a subject for general discussion by all those interested.

PHILIP MILLS JONES, President, San Francisco.
JAMES B. BULLITT, Secretary, Louisville, Ky.

University of Pennsylvania Pacific Northwest Alumni.

The annual reunion of the Pacific Northwest Alumni Association of the University of Pennsylvania will be held at the University Club, Portland, Ore., Saturday evening, July 15, 1905.

All members of the association are earnestly requested to be present, and all visiting University of Pennsylvania graduates who expect to be in Portland at that time are most cordially invited to meet with us.

CHARLES E. MCCLURE, Secretary, Seattle, Wash.

Insurance Examiners—American Urological—American Surgical—Medical Editors.

The American Urological Association will meet in Portland July 12 and 13.

The annual meeting of the American Association of Life Insurance Examining Surgeons will be held in Portland July 10. A program of unusual interest is announced.

The American Surgical Association will meet in San Francisco July 5 to 7. Many are going up the coast to Portland at the close of the meeting.

The American Medical Editors' Association will meet in Portland July 10.

THE SUBCOMMITTEES.

The chairmen of the Portland subcommittees of arrangements (which latter was mentioned on page 1762) are as follows:

COMMITTEE ON FINANCE: Dr. H. W. Coe.
COMMITTEE ON MEETING PLACES: Dr. E. F. Tucker.
COMMITTEE ON HOTELS: Dr. Wm. Jones.
COMMITTEE ON ENTERTAINMENTS: Dr. A. C. Smith.
COMMITTEE ON REGISTRATION: Dr. R. G. Coffey.
COMMITTEE ON GENERAL EXHIBITS: Dr. H. W. Coe.
COMMITTEE ON TRANSPORTATION: Dr. W. T. Williamson.
COMMITTEE ON BADGES: Dr. J. F. Dickson.
COMMITTEE ON PROGRAMS, PRINTING, ETC.: Dr. S. E. Josephi.
COMMITTEE ON BANQUETS: Dr. C. H. Wheeler.
BUREAU OF INFORMATION: Dr. J. F. Bell.
LADIES' COMMITTEE: Mrs. Helen Ladd Corbett.

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SATURDAY, JUNE 3, 1905.

FOOD FOR THOUGHT.

For several weeks the Committee on Chemistry of the Council of Pharmacy and Chemistry, with the assistance and co-operation of other chemists, has been carefully investigating and analyzing a number of proprietary articles on the market, with the object (1) of determining as nearly as possible their composition, and (2) of acquainting the medical profession of the United States with the true character of some of the medicines offered them and for which claims of great therapeutic value are made. The council publishes in the department of Pharmacology in this issue the results regarding a few of the preparations investigated. We hope that our readers will carefully study the report and at the same time will try to appreciate all it means. To realize its full import, however, one should bear in mind the claims made by the manufacturers for these preparations in regard to both their composition and their properties as remedial agents. Most of these preparations have been analyzed by several members of the committee, but to leave no room for doubt as to the facts stated, the services of expert and trustworthy chemists, not members of the council, have also been utilized.

As will be noticed, the statements made in the report are extremely conservative. For instance, the minimum amount of acetanilid found by any chemist is the amount reported. This, in part, will explain why in no instance is the total percentage 100. In cases of tablets, the amount of starch or other excipients used in forming the tablets is not incorporated in the report. Thus the analyses show that these preparations are mixtures of acetanilid, with one or more of the following: sodium bicarbonate, sodium salicylate, ammonium carbonate, caffein and citric acid.

It will be noticed that included in this report are four so-called "proprietary" preparations and two so-called "patent medicines." Medicines bearing trade names, placed on the market for physicians' use, are usually referred to as "proprietary medicines," whereas those that are offered directly to the public are called "patent medicines." We have more than once asserted that there is no difference between a certain class of "proprietaries" and "patent medicines." The report here presented, we believe, illustrates the truth of this assertion.

The report is presented to the members of the medical profession of the United States for their thoughtful consideration.

THE ATOMIC THEORY.

Through the study of radioactive substances and the closely allied phenomena exhibited by x-rays, cathode rays, etc., observations have been made that have led to considerable modifications of the views that have long been held concerning the ultimate composition of matter. So recent are these discoveries that many of the conclusions are hardly beyond the speculative stage; but it may be said that the past two years have given exceptionally great progress in the study of this most fundamental problem. For years the atomic theory has held its ground as affording a working hypothesis, for it expressed the limits of human knowledge in this direction. The atoms of chemistry had never been known to divide, each element had remained true to itself and had resisted all attempts to transform it into any other element, and all the observed phenomena of chemistry were compatible with this theory; indeed, so well does the theory hold that with it as a basis it has been possible to predict many new facts in advance of their discovery. Despite all this evidence it has been well understood that the atomic theory was, after all, only a theory, which at any time might be disproved, and we now seem to have accomplished many of the steps necessary for its dethronement. Evidence is at hand that the atom is not, as its name implies, incapable of division, and the immutability of elements is questioned on good grounds. Although these topics are at the present time under the most active discussion, and, therefore, far from settled, yet a review of the essential features, avoiding the difficulties of technical terminology, may not be untimely, it being understood that no statements are or can be made dogmatically.

In considering this problem of the constitution of matter, one must go back of the ordinary substances of the laboratory, to the ether of the physicists. This ether, which Faraday and other scientists of his time imagined as an absolutely homogeneous, structureless substance, filling all space, is now regarded as consisting of separate particles; these particles may be in immediate contact with each other, however, thus producing much the same effects as if the ether were absolutely continuous. The existence of ether, which has long been a mere hypothesis, is now regarded as proved by many. Even determinations of its weight have been made with some approach to accuracy, although to one unaccustomed to the quantities used in the estimates of physicists, astronomers, and mathematicians, it probably will not convey a very adequate conception of the extreme lightness of ether to say that its weight is to the weight of water as one is to ten raised to the seventeenth power (10^{17}). It is believed that in this great, all-pervading ether mass, not all parts are the same—the particles are all in motion, and in certain places through the revolution of the particles it is thought that vortices are formed. These vortices of rapidly moving particles acquire an electrical charge and assume a certain degree of permanence, constituting what are termed electrons. This is the ground of the modern "electron theory." The electrons are considered to be the smallest existing particles that possess electrical energy and mass. They exist free and in rapid motion in the cathode rays, and their size has been estimated at one two-thousandth part (1/2000) of that of the hydrogen atoms. Here we have fairly proved the existence of particles much smaller than any of the atoms of chemistry, and in the case of radium we find such particles constantly being given off from a definite chemical substance, constituting what are termed the *B*-rays. According to the electron theory, the "atoms" are made up of accumulations of electrons of different electrical charges.

Not only has the indivisibility of the atom thus been brought into doubt, but also the conception of the unchangeable nature of the elements, which has become almost popular knowledge through the unavailing attempts of alchemists, ancient and modern. Here, again, the radioactive substances have been the source of information. In 1895, Sir William Ramsay discovered the element helium in terrestrial substances for the first time; namely, in minerals which contained radioactive elements (radium, thorium, uranium). Helium is a gas belonging to the same group as argon, all the members of which are characterized by a high degree of chemical inertness, so that as yet they have never been found in chemical combination with other elements. The suggestive association of helium with these radioactive elements led to further studies by Ramsay and Soddy, which resulted in the remarkable discovery that helium is formed spontaneously from radium—it was even possible to collect and to isolate the helium so produced. Helium, an element, appears to be formed through the spontaneous disintegration of radium, another element; in other words, one element may be formed from another, and another essential proposition of the atomic theory is contradicted, at least in part.

The conclusions that can be reached from these observations and deductions may be stated as follows: The smallest particles of matter seem to be the ether particles, which aggregate into electrically charged, rapidly moving masses, the electrons. These, in turn, unite in some systematic manner to form the "atoms" of the "elements." Most of the atoms now existing are very stable, and resist all known methods of separation into their electrons, but there exist a few that are unstable and hence spontaneously break down into more stable forms (e. g., radium into helium), with the production of the phenomena of radioactivity. Radioactivity, therefore, may be looked on as evidence of the spontaneous decomposition of chemical atoms. At the time of the massing of the electrons into the atoms, an enormous potential energy was stored up; for example, it is estimated that by the decomposition of one gram of radium into its electrons, enough energy is liberated to lift 424 tons to a height of one kilometer. After all is said, however, we must admit that the net result is merely the substitution of one theory by another—instead of an atomic theory we have an electron theory, and we have pushed the size of the fundamental constituents of our world, as we know them, down another fraction. A theory is of value when from it new facts can be predicted and so their discovery hastened, and in this way the establishment of the electron theory may become of enormous importance. The atomic theory is not by any means displaced by the electron theory, for its value as a working hypothesis in chemical deductions still remains—at the very least the atom stands as the unit of most chemical changes, and as such is of the greatest importance.

PREPARE FOR THE FOURTH OF JULY.

In 1903, the Fourth of July tribute was 466 dead and 3.983 injured; in 1904, it was 183 dead and 3,986 injured. The first year the reported cases of tetanus numbered 415, while last year there were but 105. Within one year the deaths from tetanus were reduced by 75 per cent., although the deaths from other causes were increased by over 50 per cent., and the total number of recorded injuries was practically unchanged. Our analysis of the epidemics of previous years made it evident that the chief reason for the great tetanus mortality lay in a lack of appreciation of the danger that lies in every blank cartridge wound and the need for vigorous and skilled treatment immediately after its reception. Just before the last Fourth of July a vigorous "campaign of education" on this point was carried on throughout the country, by both the medical and the lay press, and to this cause alone can be attributed the great reduction in tetanus mortality. The average parent learned that a blank cartridge wound was a serious injury that needed surgical attention; the average physician learned that simple dressing of such wounds was little better than nothing at all, and that thorough surgical cleansing with prophylactic injections of tetanus antitoxin were required. The city father and the small boy seem to have profited somewhat also, because, for one reason and another, the number of wounds from blank cartridges fell nearly one-third in the reports, although the less tetanus-dangerous wounds from fire crackers, cannons, display fireworks and bullets all increased markedly. Hence, tetanus mortality fell while the deaths from other causes were more numerous than before.

We are now facing another celebration of Independence Day, and wondering what it will bring forth. Shall we profit by the gain of last year, or, lulled by this success, shall we relapse into the old condition? As certain as the Fourth itself, is the aftermath of death and suffering. We know that it is coming, we know how it is to be prevented, and it only remains to act on the knowledge we possess. The part that the medical profession has played and can play in this matter of public hygiene is most important; it is twofold, internal and external. The internal action within the profession consists in the development of a universal appreciation of the danger and prophylaxis of tetanus after Fourth of July injuries. As shown by the statistics of last year by far the most important factor in reducing the tetanus mortality by over 300, was the improved treatment of tetanus wounds throughout the country, due to active and intelligent action by both parents and physicians. We have every reason to believe that the profession is now generally aware of the necessities of the situation, and is prepared to take proper measures in all cases. The public, however, needs continual stirring up to remind it of past events and of future dangers. Here lies the important work for the physician outside of the direct care of the injured. Last year a large part of the success of the campaign was due to the public-spirited efforts of medical men. In many cities and towns the local medical societies urged on public authorities the necessity for enforcement of laws regulating the sale and use of dangerous explosives. Frequently this action led to very decisive results, and at the least it brought the matter before the press and the public. The daily papers have been eager advocates of reform in Fourth of July celebrations, and their utterances gain weight in public opinion when based on the action and advice of reputable medical authorities.

Another important aid in securing popular co-operation is the publication of reliable facts and figures, which in many instances may be properly furnished the press by the profession. Inspired by the frequency of eye injuries on the Fourth, the chairman of the Section on Ophthalmology devoted his address at the last annual session of the Association[1] to this subject and made many valuable suggestions as to means available to physicians in inspiring ordinances against the use and sale of dangerous fireworks, and especially in the difficult task of steering them through the rocks and shoals of municipal legislation. The campaign must be aimed in two directions—one, the stimulation of inert and inefficient civic and police authorities; the other, the education of public sentiment which is essential to the observance and enforcement of the laws. The improvement of last year should encourage further action—the record of 183 dead and 3,986 wounded shows that it is still sadly needed.

We shall take pains again this year to gather reliable statistics and hope that we may have the co-operation of our readers in so doing.

TENEMENTS.

The State Board of Tenement House Supervision of New Jersey has reason to be proud of the record it has made during the first twelve months of its existence. During this time it has assumed control of the tenement houses, old and new, throughout the state and the inspection of all plans for proposed tenement houses, the latter being defined as a single building housing more than two families. According to the report of the secretary,[1] more than three thousand notices of violation of the law have been served on landlords, all of which have been obeyed. Plans for buildings representing over three and a half millions' expenditure have been approved, and 25 per cent. of all plans examined rejected. All this has been accomplished with only one resort to the courts, the serving of a peremptory order with a notice of the penalty following non-compliance having been sufficient in all the other cases. Incidentally, the board has been a valuable aid to health officials in small communities, hampered in their efforts by the fear of offending local politicians.

The most valuable part of this report to the public outside of New Jersey is the statement made in regard to the conditions found to exist in small cities and rural communities in that state. When the law which created this board was framed, objection was made to the extension of its authority over small towns and boroughs, where, it was argued, conditions did not require such supervision. The board has discovered, however, that bad housing conditions are not confined to the large or even to the second-class cities, but are surprisingly numerous in places where land is abundant and cheap and where the only excuse for overcrowding is the greed of the landlord and the ignorance and low standards of the foreign immigrant.

Tenements designed for from six to ten families were found in process of construction in small towns or at the edge of cities where there was no proper sewer or water supply, the landlord striving to reproduce in a region of ample space the conditions to be found in the old and crowded quarters of our city slums. In other instances, old residence houses were being remodeled to make them accommodate several families, with utter disregard of such factors as light, air and privacy. Mr. Allen states that "privy vaults filled to overflowing, cellars and outhouses reeking with filth, sleeping rooms unlighted and unventilated, all are to be found in sections of the state where land is cheap and where there would seem to be no excuse for the people living in herds." Attractive, prosperous little cities like Plainfield, the Oranges and Montclair were found to contain such "slum" conditions.

What is true of New Jersey is certainly true of many other states. The housing problems of our great cities are so enormous, the conditions there so spectacular, that they tend to blind us to the evils, slighter in extent, but identical in character, which are to be found in small cities and even in villages where large factories have been built. We venture to predict that there are few small cities or towns which will not be found to contain their own "slum" districts if careful search be made; and these slums are a serious menace to the health and morals of any community. No evil is more insidious in its onset than the insanitary, overcrowded tenement, none more easy to prevent, none more difficult and expensive to eradicate after it has gained a firm hold. New Jersey is to be congratulated on the vigorous opening of her campaign for improved housing conditions.

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[1] Thoughts Suggested by a Study of the Eye Injuries of Independence Day. Robert L. Randolph, M.D., The Journal A. M. A., Dec. 10, 1904.

[1] "Housing in the Smaller Municipalities," Charles J. Allen, Charities, May 6, 1905.

ISTHMIAN SANITATION AND THE PRESENT STATUS OF THE SANITARY DEPARTMENT.

Interest in sanitary affairs at the isthmus is just now centered in two special features, namely, the state of health in the canal zone and in the cities of Panama and Colon and the status of the sanitary department under the new canal commission.

With reference to the general health within the canal zone it is gratifying to be able to state that advices as late as May 10 were to the effect that with 11,000 men on the rolls, there were only 199 on the sick list; later advices do not change these figures, which are certainly favorable. This fact should be generally heralded if for no other reason than that its widespread dissemination would tend to increase the confidence in the efficient sanitary administration and to dissipate the deep-seated dread of the climate which, judging from experience under the American occupation, has been much maligned. At the same time it is important to remember that both yellow fever and malaria continue to stand as menaces to the successful prosecution of the great work. With reference to yellow fever no fresh case occurred from March 23 to April 17 and the hope was entertained that it had been stamped out. It must be said. however. that it was a rash hope in view of the fact that the water works with supplementary drainage for Panama are not yet completed and that both that city and Colon are compelled even yet to rely on water from wells distributed by peddlers and stored in the ever-mischievous water barrels. That the hope was in fact delusive was shown by the additional fact that about April 17 a large administration building, in which some 300 nonimmunes were housed, became the scene of an outbreak which yielded 15 cases of yellow fever, 4 of which had died up to May 10. The last case, we are advised, occurred May 21 and is doing well. The premises were, however. speedily and thoroughly fumigated and it is thought that that particular outbreak is at an end.

But more serious is the fact that there has been a sporadic development of yellow fever at Colon, which until recently has been considered free from the infection. This is serious, not from the extent of the disease which. we believe. has so far been limited to a very few cases. but from the fact that, unlike Panama, there is no prospect for the immediate installation of a proper water supply and. consequently. no immediate prospect for the abolition of the water barrels, and the consequent propagation of the stegomyia. Until a reliable water supply derived probably from the upper Chagras, supplemented with drainage, can be installed, effective sanitation of Colon can not be expected. This promises to require at best a period of eighteen months or two years. In the meantime the sanitary department can be relied on to fight this disease, as it is constantly fighting the more widely diffused malaria, with every instrumentality at its disposal and with the probable result that anything like an epidemic manifestation of yellow fever will be averted.

But what instrumentalities has the sanitary department at its disposal? This brings up the question of the status of that department under the new commission. In this connection, the New York *Sun,* while praising the President for his promptness in changing the commission and while praising the personnel of the new commission, calls attention to the fact that Judge Magoon is designated by executive order as "commissioner in charge of government and sanitation" as an evidence that the sanitary department is still technically subordinated to lay dictatorship. It is possibly true that the President's orders are susceptible of this construction and that the "commissioner in charge of government and sanitation" has, if he chooses, the last word to say on sanitary questions. But it is known that Secretary Taft took early opportunity, after the appointment of the new commission, to make it clear that the supervising discretion of the commission, so far as sanitary matters were concerned, would be limited in practice, chiefly and essentially to a just and equable apportionment of such funds as Congress may, from time to time, make available for the general purposes of the enterprise. Any less reservation of power by the commission would certainly be incompatible with good government. In the meantime it is satisfactory to relate that Governor Magoon, almost as the first act of his administration, manifested his interest in sanitary matters by approving in their entirety the requisitions of Colonel Gorgas for the next six months to the amount of nearly $700,000, and by increasing the salary not only of Colonel Gorgas, but of practically the entire personnel of the sanitary department, the details of which were published in THE JOURNAL three weeks ago. The cumbersome and inefficient purchasing machinery set up by the old commission has been abolished and purchases are now made by the purchasing department of the Army as they ought to have been made from the start. Major Kean of the Surgeon-General's office is now on the isthmus to confer with Colonel Gorgas relative to still greater expedition in the matter of making and forwarding supplies; although since March materials for the sanitary department have been arriving as rapidly as existing transportation facilities will permit. The maintenance of transports for isthmian service is simply a vital necessity. The sanitary department has been given charge of its own property and of its own construction—two privileges that were heretofore denied. These privileges were, indeed, practically all that Colonel Gorgas had asked for from the beginning; other points are considered of comparatively small importance. Reports from the isthmus are to the effect that Colonel Gorgas, pursuant to Secretary Taft's orders, has been serving *ad interim* as governor of the canal zone, pending the arrival there of Governor Magoon—a merited expression of confidence on the part of the Secretary. Further reports are to the effect that the orders of the sanitary department are being more generally obeyed than formerly in Panama and Colon, where, after all, the great sanitary engagement is being fought. Taken all in all the status of the sanitary department has been vastly improved; and the results of its labors are, in consequence, already improved. It is a pleasure to be able to sustain Secretary Taft in the wise course he has taken in the matter.

THE PORTLAND SESSION.

Much space is taken up in this issue with a description of Portland as the next place of meeting of the American Medical Association, the routes to and from Portland, the section programs and other matter of information and interest regarding the coming session. While the place of meeting is in the extreme west, and a long distance from the center of population, there is every promise of a large attendance. At this opportune time of year, most of those who go will make the trip their summer vacation. and will take the opportunity to see and know what the "Great West" contains. An unusually large number of special parties have been arranged, some to make the round trip, others to travel together one way only. The itinerary has been studied out so that the most for the money and the time can be obtained. The great West is full of natural wonders and grand scenery, and to make the best use of the opportunity it is necessary that, before starting, one should study out the various routes in detail, aided by maps and railroad circulars. There is so much to be seen that one is liable to go very near to some attractive point that could have been seen easily and not know it till it is too late. The attraction of the scientific work of the session is not to be ignored. A reference to the preliminary program will show that the various sections offer a sufficient variety of scientific topics to attract every specialist as well as the general practitioners of the country and the city doctor. All will be welcome.

CHARLATANS NOT ALL MEDICAL.

The *Spectator*, an insurance journal. in its issue of May 18, 1905, comments editorially on personal damage suits in a manner interesting to medical men. As a text, it reprints from a New York newspaper this advertisement: "Successful lawyer takes accident and other cases absolutely free unless successful; large settlements quickly obtained; advice free." The wording might almost be copied from the glittering promises of the medical quack. Calling these renegade lawyers "shysters" and "ambulance chasers," the *Spectator* recounts the circumstances of an utterly unjust suit for personal injuries instigated by one of them under conditions perfectly familiar to physicians, and makes the unqualified statement that hundreds of these claims would never be made but for "the intervention of meddlesome lawyers." No one charges the legal profession as a whole with these sins, but we echo the plea of our contemporary that the bar associations should at once make serious efforts to purge their profession of this crying abuse. Physicians, as well as employers and corporations, have suffered much from this species of blackmail; and, while we have our own sins to answer for, we hope to be pardoned for suggesting to the lawyers that an organized effort on their part to expel the shysters would meet with widespread approval. The medical profession through its effective organization has shown the way through which the slow but certain force of permanent reform may work toward greatly improved conditions.

THE DISSEMINATION OF MAMMARY CARCINOMA.

There is probably no subject of such great interest from both the academic and the practical standpoints as the dissemination of malignant neoplasms. Notwithstanding the enormous amount of pathologic work which has been lavished on the subject in the last few years, we can still say, with Handley,[1] "the subject of cancerous dissemination is in a somewhat hazy and indeterminate condition." In the case of mammary carcinoma, the commonest form met with in general practice, the question of metastases is of great importance, particularly from the surgical point of view. The frequency with which this form of growth gives rise to secondary nodules in the skin, the bones, and the internal organs has long been known, but the route of infection of the bones and internal organs has been a *much-disputed* question. It is probably true that the generally accepted theory has been that the infection of the axillary lymph glands is due to lymphatic infection and emboli of tumor cells. It has also been generally held that regional nodules in the skin, fascia, or muscle were due to lymphatic infection either by direct extension or by embolism. The point most in question is the route by which metastases in the bones and internal organs are carried. Most writers have held that the carcinoma cells are transported to these situations by the blood stream. Handley is entirely opposed to blood transmission, and his recent Hunterian Lectures are largely taken up with a consideration of the facts opposing it and in favor of lymph transmission. The methods of transmission are divided, according to this author, into external or parietal dissemination and internal or visceral dissemination. Handley claims that however distant skin foci are from the original growth they are still transmitted by the lymphatics. According to this conception of carcinoma metastases, the process is one of direct extension through the lymph vessels: in fact, by serial sections of long strips of skin and subcutaneous tissue. Handley claims to have traced a continuity between the primary and secondary growths.

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[1] Hunterian Lectures, Lancet, April 8, 15 and 22, 1905. Abstracted in The Journal, May 20, 1904. p. 1644.

The lymph channels mainly involved are the medium-sized ones running on the deep fascia, the skin, bones, and serous cavities being secondarily infected from these. If such a conception is correct, and it is certainly based on careful observation, it means that we must modify our present surgical procedures and pay more attention to the removal of the deep fascia and less to the removal of skin. Handley even suggests removing the fascia down to the epigastric region, as he claims that since the modern operations for breast cancer, while infection of the pleura has become less, the same is not true of infection of the peritoneum through the epigastric region.

THE COMPARATIVE VALUE OF HORSES IN THE PRODUCTION OF DIPHTHERIA ANTITOXIN.

As might have been expected, it has been found that horses do not all react alike in response to inoculations with diphtheria-toxin for the purpose of producing antitoxin, and no method is yet known by which high-test horses can be selected without being submitted to the tedious process of immunization. It has been shown that every horse has a maximum antitoxic limit, which can not be increased no matter how much toxin is employed. As the outcome of a study of the records of 100 horses immunized to diphtheria-toxin, Dr. William R. Hubbert[1] found that in order to obtain the best results in the production of diphtheria-antitoxin, young animals are usually to be preferred. More than one half the number of such horses can be made to yield 300-unit serum, while one-third will yield 500-unit serum. High-test horses require a shorter time for immunization and will yield a potent serum for a longer period than will low-test horses. The maximum antitoxin value is attained within from two to ten months from the beginning of treatment, the average being about four months. Serum of marketable value may be obtained for a few months longer, about five months on the average, when the decline begins, usually never to rise again. If the serum of a new horse does not test 300 units by the end of the fourth month after treatment has been begun, it may be regarded as nearly certain that the animal is not suitable for the purpose in view. A horse is usually at his best during the fourth month of immunization. Horses attaining a high antitoxic strength exhibit a longer period of usefulness than do lower-testing horses, but usually at the expense of a much lower unit value. A horse that has attained a maximum antitoxic height begins to suffer a decline in antitoxin, which is usually as rapid as was the ascent, and it is unaffected by subsequent injections of diphtheria-toxin.

Medical News

ARKANSAS.

Dr. Taylor Left Large Estate.—The estate of the late Dr. Charles M. Taylor, Little Rock, is valued at half a million dollars.

To Annul Certificates of Drink and Drug Habitues.—A bill has been passed by the House of Representatives providing for the cancellation of the certificates of all physicians who are habitual drunkards or users of cocain.

Unregistered Physician Fined.—Dr. Thomas B. Rider, Hot Springs, charged with violating the laws laid down by the secretary of the interior for the government of the United States Reservation in that he, not being a registered physician, had prescribed baths for one of his patients, was fined $25, May 20, and took an appeal to the higher court.

Personal.—The Pine Bluff Board of Health has organized with Dr. Henry E. Williams, president, and Dr. W. H. Blankenship, secretary.——Dr. Foster G. Richardson, Conway, has been elected assistant physician at the state penitentiary and has been assigned to duty at the state farm.——Dr. John B. Bond, Little Rock, who was recently operated on for appendicitis, is making favorable progress toward recovery.

CALIFORNIA.

Uxoricide Found Guilty.—Dr. Frederick N. Staples, Amador City, who killed his wife by poison and ran away to Mexico with another woman, was found guilty of murder in the first degree May 15 and will be sentenced to death.

Branch Society Organized.—The Eye, Ear, Nose and Throat Section of the Los Angeles County Medical Society was organized May 10, with a charter membership of 24. Its officers are William D. Babcock, chairman, and F. W. Miller, clerk.

Acquitted.—Dr. Otto C. Joslen, known also as Dr. White, San Francisco, has been acquitted. He was charged with having caused the death of a woman by an illegal operation.——Dr. B. C. Neff, Bakersfield, charged with practicing medicine without a license, was acquitted April 28.

Oppose Contract Doctors.—The Sonoma County Medical Society, at its meeting in Sebastopol May 11, adopted the following resolution:

> *Resolved.* That we, the members of the Sonoma County Medical Society, pledge ourselves not to meet in consultation any doctor who violates Section 1 of amendments to our by-laws, relating to contract work; or any physician who does professionally officiate with such doctors; and that the secretary be instructed to send the names of doctors doing contract work, with a copy of this resolution, to every member of this society.

Antispitting.—The health officer of San Francisco has had posted in all public buildings the following notice regarding expectoration:

> SPITTING SPREADS DISEASE.
>
> It is, therefore, prohibited on sidewalks and on the floors of public conveyances, public halls, lobbies of theaters, office buildings, etc.
>
> Violators are liable to arrest and fine under an ordinance of the Board of Supervisors of the city and county of San Francisco.
>
> This order will be enforced by the Department of Health and the Department of Police.
>
> *By order of the Board of Health.*
>
> D. F. RAGAN, M.D., Health Officer.

April Mortality.—Reports for April, representing a population of 968,750, show a mortality of 1,265, or an annual rate of 15.67 per 1,000. In the public institutions, with a population of 9,401, there were 40 deaths, annual rate of 51.06 per 1,000. Among the causes of death were: Tuberculosis, 206; heart disease, 163; pneumonia, 94; cancer, 86; bronchitis, 20; diarrhea and dysentery, 20; typhoid fever, 16; alcoholism, 13; diphtheria, 12; cerebrospinal fever, 10; cholera infantum, 5; whooping cough, 4; influenza, 4; erysipelas, 2; typhomalarial fever, 2.

Found Guilty.—Dr. L. H. Meadows, San Francisco, alias "Dr. R. H. Westen" and "the old reliable Dr. West," on May 12, was found guilty of using the mails for improper purposes, was released on bail of $3,000, and ordered to appear for sentence May 23.——"Prof." Joseph Fandrey, "rupture specialist," of Los Angeles, charged with practicing medicine without a license, was found guilty May 12 and fined $250. This is his second conviction for a similar offense.——Dr. D. E. Lee, San Francisco, alias "Dr. R. Brooks Stirling," San Francisco, was convicted, May 15, of sending prohibited matter through the mails.

Graduations.—The University of California Medical Department (Toland Medical College), San Francisco, graduated a class of 17, May 17.——On May 18 the College of Physicians and Surgeons of San Francisco held its commencement exercises and graduated a class of 19. Hon. H. M. Delmar delivered an address on "The Dignity, the Responsibility and the Duty of the Medical Profession." Dr. Winslow Anderson, president of the college, conferred the degrees, and Prof. H. D'Arcy Power delivered an address on "The Relation of the Public to the Medical Profession."——Cooper Medical College, at its annual commencement exercises, graduated a class of

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[1] Jour. of Exp. Med., vol. vii, No. 2, p. 176.

37. Addresses were delivered by Prof. C. N. Ellinwood and Edward R. Taylor.

Personal.—Dr. Thomas M. Hayden has been elected health officer of Fresno.——Dr. James E. Taylor, Weaverville, has been appointed physician of Trinity County, vice Dr. David B. Fields.——Dr. Elizabeth Gallimore, San Jose, was thrown from her carriage in a runaway accident, May 7, and seriously injured.——Dr. Edward B. Robinson, San Francisco, has gone to Bristol Bay, Alaska.——Dr. John D. Meng has been reappointed health officer of Chico.——The health board of Oakland has organized with Dr. Frank L. Adams as president and Dr. Edward N. Ewer, health officer. Drs. Edward R. Sill and T. A. Williams are the other new members of the board.——Dr. J. Myler Crenshaw, Redlands, has succeeded Dr. Cooper as health officer of San Bernardino.——Dr. Albert Soiland, Los Angeles, has gone abroad for four months.

COLORADO.

Correction.—Dr. Thomas H. Hawkins, Denver, requests that the item regarding him in The Journal of March 11 be corrected. He still holds the position of president of the medical staff of St. Anthony's Hospital.

Medico-Military Appointments.—Surgeon-General Matt. H. Root, Denver, has appointed Dr. T. Edward Carmody, major and surgeon, and Dr. Harry P. Packard, captain and assistant surgeon, N. G. Colo., both of Denver.

Judgment for Leaving Sponge.—In the case of Mrs. Mary E. Flamböe, Boulder, against Dr. Charles S. Elder, Denver, in which she claimed that a sponge was not removed after an operation and sued for damages of $10,000, the jury on May 21 returned a verdict for the plaintiff for $400.

Go Forth to Heal.—Chancellor H. A. Buchtel of the University of Denver conferred degrees on a class of 31 graduates from the Denver and Gross College of Medicine, May 18. The address of the evening was made by Hon. Robert W. Bonynge, and Dr. Leonard Freeman delivered the faculty address.

Personal.—Dr. Lewis E. Lemen, Denver, has been appointed a member of the State Board of Health, vice Dr. Hubert Work, Pueblo, resigned.——Dr. Eugene H. Robertson, Boulder, has resigned the chair of pathology and bacteriology in the University of Colorado.——Dr. Alice B. Guthrie, Denver, is seriously ill with ptomaine poisoning.

ILLINOIS.

Thousands for St. Mary's.—The fair recently held in Quincy for the benefit of St. Mary's Hospital netted $4,140.33 for the institution.

Trolley Receipts for Hospital.—On May 26 the entire proceeds of the street car system of Galesburg were given to the Galesburg Hospital.

Personal.—Dr. Samuel R. Hopkins, Springfield, has gone to Europe for a year of study.——Drs. John G. Massie, Belleville, and William C. Spannagel, East St. Louis, have been appointed physicians for St. Clair County.

Physicians of Illinois.—The State Board of Health has just published the final Supplement to the Official Register of Legally Qualified Physicians of 1903. The report shows that there are 9,980 physicians in Illinois. The secretary announces that the 1905 Report on Medical Education and Official Register of Physicians will be published about October 1.

Pass Merit Test.—As the result of the recent examinations for senior physicians at the Cook County institutions, the following have been placed on the eligible list: Nervous and mental diseases—Drs. Joseph M. Kearney, Elgin; Ralph C. Hamill, Chicago; Ernest S. Moore, Chicago; Groesbeck Walsh, Chicago; Benjamin Landau, Dunning; Clara Dunn, Chicago; Julius F. Wen Gleski, Chicago; Goodrich Snow, Princeton, and I. G. Blackmer, Dunning; tuberculosis—Drs. Ernest S. Moore, Chicago, and Benjamin Landau, Dunning; medicine—Drs. Ralph C. Hamill, Chicago; Benjamin Landau, Dunning; Goodrich Snow, Princeton, and Julius F. Wen Gleski, Chicago.

Chicago.

Personal.—Dr. and Mrs. James C. Gill have sailed for Europe.——Dr. and Mrs. P. J. H. Farrell and family have gone to their summer home, East Elmira, N. Y.

Unger Liberated.—Dr. August M. Unger, who was sent to the state penitentiary July 11, 1901, on an indeterminate sentence for conspiracy to defraud a life insurance company, was released April 10.

Speed Parting Guests.—A farewell dinner was given to Dr. Llewellys F. Barker, who goes to Johns Hopkins, and Prof. John F. Jameson, who goes to the Carnegie Institution, by the faculty of the University of Chicago, May 27.

Rush Surgical Faculty.—Dr. John B. Murphy has been appointed a professor of surgery and will assume his duties in the fall semester. He has also been appointed attending surgeon to Presbyterian Hospital. Dr. N. Senn remains the head of the surgical department, limiting his duties to clinical work in the fall semester, and Dr. Arthur D. Bevan retaining his position in the department.

Deaths of the Week.—Measured by the mortality of the week public health conditions are extremely favorable. The total, 434 deaths from all causes, represents an annual rate of only 11.89 per 1,000. Since 1892 the average May mortality has been 15.10 per 1,000. Of the deaths, 62 were due to consumption, 48 to pneumonia, 43 to heart diseases, 42 to violence, 33 to Bright's disease and 28 to cancer.

Wins Fight Against Typhoid.—The Department of Health rejoices in the present showing as regards typhoid fever mortality. In the current issue of the *Bulletin* it is said:

> Chicago's finally successful fight against typhoid fever covers a period of less than a dozen years.
>
> In 1891 it had the highest typhoid death rate of any large city in the world—17.38 per 10,000 of its population.
>
> In 1905 its typhoid rate is among the lowest—1.21 per 10,000 for the 147 elapsed days of the year, and a reduction of more than 93 per cent. from the rate of 1891.
>
> The 1891 rate had a single obvious cause—a sanitary blunder. The 1905 rate is the result of persistent, intelligent sanitary effort.

Adds Fifth Year.—Rush Medical College announces that beginning with the session of 1905-1906 a fifth year will be added to the curriculum, which for the present will be optional. The work of this year will be that of (a) a fellowship in one of the departments of the college, or (b) an interneship in the hospital under the following conditions: 1. Each student taking such work will be under the supervision of the faculty by whom the hospital in which the interneship is taken must be approved. 2. The student must present evidence of thorough clinical work and, if possible, an exhaustive study of a selected group of clinical cases involving original work. 3. He will be required to pass a special examination at the end of the year. On the successful completion of this fifth year he will receive the degree of Doctor of Medicine *cum laude.*

MARYLAND.

Personal.—Dr. James H. Carpenter has been elected secretary of the Midland Board of Health.

Examiners Will Meet.—The Board of Medical Examiners of Maryland will hold the regular examinations in Baltimore, June 21 to 24. Applications will not be received after June 14.

Donations to Hospital.—The Board of County Commissioners of Cecil County has appropriated $2,000 toward the proposed Union Hospital of Cecil County, Elkton. Citizens of the county have already subscribed $2,500 and the state will appropriate $5,000, making a building fund of $9,500.

Hospital Work.—The seventh annual report of Frederick City Hospital shows that 138 patients were treated during the year, 56 male and 82 female. There were 76 operations performed. There were 8 deaths, 5 surgical and 3 medical. There are 5 free beds. The receipts were $9,410 and the expenses $5,876, leaving a balance of $3,533.

Alumni Meet.—The spring meeting of the General Alumni Association of the University of Maryland was held May 25. A sketch of Prof. George W. Miltenberger, M.D., prepared by Dr. I. S. Stone of Washington, D. C., was read and a committee appointed to prepare for an appropriate celebration of the centennial of the association in 1907.

Baltimore.

Low Death Rate.—The death rate continues low. It was equivalent to an annual rate of 14.28 per 1,000 last week, and the rate for whites alone was 12.55 per 1,000.

Will Have Hospital.—The Board of Public Improvements has approved the ordinance appropriating $25,000 out of the levy for 1906, for an infectious diseases hospital.

Personal.—Dr. J. Hall Pleasants will be the resident physician at Buena Vista in the Blue Ridge Mountains.——Dr. J. Clement Clark, superintendent of Springfield Asylum for the Insane, has returned from Europe.——Dr. William Hewson Baltzell will spend the summer abroad.

Hospital Appointments.—Dr. Albert L. Wilkinson has been appointed resident physician in charge at the Hebrew Hospital, and Drs. J. A. Seligman and Joshua Rosett, dispensary physicians.——Dr. Alexander D. McConachie has been appointed consulting ophthalmic surgeon to the Church Home and Infirmary to fill the vacancy occasioned by the death of Dr. Russell Murdoch.——At Bayview Asylum, Dr. H. D. Purdour, resident physician in charge of the insane department, has resigned to enter private practice, and Dr. N. N. Owensby has been appointed in his place. Drs. J. N. Hess and Jesse Stilwell have been appointed resident physicians.

MINNESOTA.

Hospital Notes.—Leslie Hospital, Duluth, has closed for lack of patronage.——K. J. Taralseth has given $1.000, and Mayor Lungren and Dr. Theodore Bratrud $750 each toward the Warren Hospital.——The new Pipestone City Hospital was publicly opened March 31.

Personal.—Dr. Albert F. Groves, Brainerd, has been elected president of the State Board of Medical Examiners.——Dr. Ernest E. Wells, Stillwater, has been appointed coroner of Washington County, vice Dr. George N. Watier, deceased.——Dr. F. J. Bohland-Fuchs and family have gone to Germany for six months.

Abortionists Sentenced.—Drs. William C. Van Damme, Minneapolis, and Matthew L. Hadsell, St. Paul, convicted of performing a criminal abortion on a young woman, were sentenced to imprisonment in the state penitentiary for four years.——Hannah M. Lund-Begin, for the same offense, has been sentenced to imprisonment for two years and four months.

Vetoes Chiropractic Bill.—The governor has vetoed Senator Gjertsen's chiropractic bill for the following reasons:

> The best information of which I am possessed reveals to me the fact that chiropractic, so called, is a discovery of very recent origin, and was discovered and developed by men who were not learned in the science of healing disease. It is not apparent to me that the devotees of this so-called art in this state are possessed of the proper knowledge of anatomy and kindred subjects to properly constitute a board for the examination of others in those subjects.
>
> The enactment of a law creating a state board of chiropractic examiners and registration, and to regulate the practice of chiropractic in the State of Minnesota, and to license chiropractors, will dignify this new and untried school to the extent that the people will look to it as panacea and remedy for the ills to which the human body is heir, and must, from the very nature of that confidence so established be more or less imposed on by practitioners who will have adopted this means to abuse the confidence of the public.
>
> Chiropractic has not yet become a science or even a school, and is at best but an untried experiment, which has produced no lasting or definite results. Among the applicants for positions on this proposed board are insurance agents and men in other walks in life with absolutely no medical training whatever. The health of the public is the first essential, and should be safeguarded by every possible legal requirement, and if chiropractic must be recognized at all, those practicing this so-called art should certainly be required to pass examination in the essential branches, by due and regular examination before the state medical board, which represents the best thought and is the recognized and established standard which has been developed from the experience of the ages.

MONTANA.

Examining Board Election.—The State Board of Medical Examiners has elected Dr. Ernest Crutcher, Great Falls, president; Dr. William C. Riddell, Helena, secretary, and Dr. Robert D. Alton, Livingston, treasurer.

Propose Hospital for Havre.—At a recent meeting of business men of Havre Joseph Gussenhaven offered to donate 15 town lots as a site for a hospital. A committee was appointed to raise funds for the erection of the hospital.

President Entertains.—Dr. Thomas A. Grigg, Butte, the newly elected president of the Silver Bow County Medical Society, entertained about 30 members of the society and invited guests at dinner. Dr. John W. Gunn, Butte, presided as toastmaster.

Personal.—Dr. Arthur Jordan, Marysville, has been appointed deputy physician for Lewis and Clarke County, vice Dr. Oscar M. Lanstrum.——Dr. Edgar F. Dodds has returned to Missoula after two years of study in Europe.——Dr. Thomas J. Sullivan, Butte, has been appointed a member of the State Board of Health.

NEVADA.

Pneumonia Epidemic.—Pneumonia has been so prevalent in Tonopah as to cause great alarm, and has assumed almost the characteristics of an epidemic. Dr. Simeon L. Lee, Carson, secretary of the State Board of Health, who was sent to Tonopah to investigate the health conditions, reports that from January 1 to April 16, 56 deaths occurred, of which 47 were from pneumonia.

State Society Meets.—The Nevada State Medical Society convened at Reno for its first annual meeting since its reorganization, May 9, the president, Dr. W. L. Moore, Verdi, in the chair. In addition to the literary program the society was entertained at the Nevada Hospital for Mental Diseases, and at a banquet at the Riverside Hotel, at which Dr. J. A. Lewis officiated as toastmaster. The following officers were elected: President, Dr. John E. Pickard, Virginia City; vice-presidents, Drs. John A. Ascher and John A. Lewis, Reno; secretary (reelected), Dr. J. L. Robinson, Reno; censors, Drs. Clarence H. Woods, H. E. Hershiser, Reno, and H. E. Franck; delegate to the American Medical Association, Dr. George H. Thoma, Reno, and alternate, Dr. John A. Lewis, Reno. The society will meet next year in Reno.

NEW YORK.

Personal.—Dr. De Lancey Rochester, Buffalo, recently had a man arrested in the street cars for violation of the spitting ordinance.——Dr. John L. Archambault has been appointed health officer, and John M. Adey, registrar of vital statistics of Cohoes.

Donations to Hospitals.—Mrs. Alvira M. Bodwell has given $5,000 to the building fund of the Plattsburgh City Hospital, in memory of her husband, the late William H. Bodwell.——Mrs. Stella Leiter, Syracuse, has given $25,000 to the National Jewish Hospital for Consumptives, Denver, thereby carrying out her deceased husband's wish.

Preparing for Final Union.—The officers of the New York State Medical Association are taking every precaution to avoid legal difficulties that might prevent final action next October looking to the union with the Medical Society of the State of New York. Each individual member is being served with notice of the proposed action, and is given an opportunity to appoint a proxy if he can not attend the meeting himself. It looks now as though nothing could prevent that which practically every member of both the association and the society desires—union.

To Protect Milk Supply.—Governor Higgins signed Assemblyman Ambler's bill requiring owners or operators of milk stations to procure licenses from the state commissioner of agriculture. In applying for such license the operator must file an affidavit declaring that he will not take part in or permit the adulteration of milk at his station. There is an amendment to this bill which declares that no one shall sell or offer for sale any imitation or semblance of cream which is not cream, and also an amendment which provides that no person purchasing milk or cream at dairies on the basis of the amount of fat contained in the milk shall credit any patron with a greater percentage of fat than is acually contained in the milk or cream so delivered. A part of New York City health officials has been inspecting the creameries along the line of the Erie Railroad and states that it has found a great improvement over the conditions formerly noted. There seemed to be no lack of co-operation on the part of any one.

New York City.

Fined for Irregular Issue of Certificate.—Dr. John W. Perille was fined $75 May 14 for signing the death certificate of a child who had died from bronchitis without having seen the patient or viewed the body.

War on Mosquitoes.—Dr. Alvah H. Doty, health officer of New York, has been appointed to direct the work of attempting to exterminate mosquitoes on Staten Island. One thousand dollars was appropriated for this purpose. It is expected that the residents of Staten Island will do their share of the work.

Personal.—Dr. and Mrs. Thomas E. Satterthwaite sailed on the *Kroonland* for Antwerp, May 27.——Dr. Jacob Sobel has been appointed adjunct pediatrist to Syndenham Hospital.——Dr. Albert H. Brundage, Brooklyn, has been appointed chairman and chief contributor for the department of toxicology and pharmacology of the Lewis and Clark Exposition, Portland, Ore.

Contagious Diseases.—There were reported to the sanitary bureau for the week ended May 20, 769 cases of measles, with 10 deaths; 410 cases of tuberculosis, with 155 deaths; 345 cases of diphtheria, with 36 deaths; 201 cases of scarlet fever, with 13 deaths; 99 cases of cerebrospinal meningitis, with 72 deaths; 23 cases of typhoid fever, with 9 deaths; one fatal case of smallpox, and 152 cases of varicella.

Bar Meningitis Cases.—On the theory that cerebrospinal meningitis is contagious, several hospitals have declined to take patients suffering from this disease. Bellevue Hospital, with an out-door ward set apart for the disease, is receiving an average of half a dozen cases daily. Flower Hospital has closed its doors to the disease by a vote of 2 to 1 of its directors. New York, Roosevelt and Presbyterian hospitals have turned away many meningitis cases because their children's wards are given up almost entirely to this disease.

Oppose City Hospital.—Dr. Darlington and Dr. Hermann M. Biggs, representing the Health Board of New York City, visited the town of Mamakating, Sullivan County, for the purpose of convincing the residents of that vicinity that it would be a good thing for them to have a sanatorium for the care of tuberculosis patients established in that town. About 300 citizens attended the meeting, the majority of whom opposed the project. It was stated that the institution would be a charitable one and that the patients would not be allowed outside the park. Decision was reserved.

New Society.—A new society called the Harvey Society, consisting of laboratory workers in New York City, has recently been established under the patronage of the New York Academy of Medicine. Its purpose is the diffusion of scientific knowledge in selected chapters of anatomy, physiology, bacteriology, pathology, pharmacology and physiologic and pathologic chemistry, by the means of public lectures by men who are workers in the subjects presented. Each lecture is intended to represent the state of modern knowledge concerning the topic treated and at the same time will be adapted for presentation before an audience consisting of that portion of the general medical profession who are interested in the scientific side of medicine. It is hoped that through these lectures the common interests of research workers and the medical profession may be profitably cultivated. The fulfillment of the purposes of the society has been entrusted to the hands of the following committee: Dr. Graham Lusk, president; Dr. Simon Flexnor, vice-president; Dr. George B. Wallace, secretary; Dr. Frederic S. Lee, treasurer, and Drs. Christian A. Herter, S. J. Meltzer and E. K. Dunham. The members of the society consist of two classes—active and associate. Active members are laboratory workers in the medical sciences residing in New York; associate members are such persons as may be in sympathy with the objects of the society and reside in New York. The first course of lectures will be given on Saturday evenings next winter at the Academy of Medicine.

NORTH DAKOTA.

State Board Organizes.—The State Board of Health met at Bismarck for organization May 8 and elected Attorney General C. N. Frich, president; Dr. Edward C. Haagensen, Hillsboro, vice-president, and Dr. Henry H. Healy, Grand Forks, secretary.

Hospitals Incorporated.—Sheyenne Kreds Hospital Association, Rugby, has been incorporated.——Lutheran Hospital Association has been incorporated at Fargo, with a capital stock of $50,000.——St. Alexius Hospital has been incorporated at Bismarck, and contracts for its construction have been let.

OREGON.

Personal.—Dr. F. W. Van Dyke, Grant's Pass, has returned from Europe.——Dr. Gustav Baar, Portland, returned from Europe May 18.——Dr. Woods Hutchinson, Portland, is about to remove to Los Angeles, Cal.——Dr. A. C. Stanley has just begun his ninth term as mayor of Gold Hill. In honor of the event the citizens presented him with a gold-headed cane.

City and County Society Elects.—At the annual meeting of the City and County Medical Society, Portland, May 17, the following officers were elected: Dr. Henry W. Coe, president; Dr. William H. Skene, vice-president; Dr. Alexander D. Mackenzie, secretary; Dr. Joseph A. Pettit, treasurer, and Drs. Edward P. Geary, Andrew C. Panton and Otto S. Binswanger, censors.

PENNSYLVANIA.

West Penn Commencement.—A class of 63 was graduated from the Western Pennsylvania Medical College, Pittsburg, June 1.

A Dangerous Occupation.—The report of the state department of mines for 1904 for the 15 anthracite districts shows that out of 161.330 employes. 595 fatal accidents occurred and 1,407 non-fatal accidents during the 213 working days.

Personal.—Dr. William R. Batt, of Philadelphia, has been appointed state registrar of state vital statistics by the State Board of Health.——Dr. William O. Lubken, Johnstown, has been seriously ill with appendicitis, but is now improving.——Dr. J. Dan Hogue has been made a resident physician of Altoona Hospital, vice Dr. E. L. Wignall, resigned.

Hospital Appointments.—Allentown Hospital, Dr. Mahlon G. Miller; St. Vincent's Hospital, Erie, Dr. Charles A. Davlin; Mercy Hospital, Pittsburg, Drs. Jocelyn J. Emmens and Joseph J. Levy; West Chester Hospital, Dr. D. Edgar Hutchinson; Wilkesbarre City Hospital, Drs. James J. Mac Fayden, Jr., and A. Burton Smith; Mercy Hospital, Wilkesbarre, Dr. Hugh J. Lenahan.

Philadelphia.

Resignation.—Dr. Edith Warner Cadwallader has resigned from the chair of obstetrics in the Woman's Medical College of Pennsylvania, to take effect on the election of her successor.

In Memoriam Frances Emily White.—A bronze tablet in memory of Dr. Frances E. White, late professor of physiology at the Woman's Medical College of Pennsylvania, was unveiled May 18.

Entertainment for Charity.—On May 24 and 25 a bazaar of nations was held at the residence of Mr. John Wanamaker for the benefit of the Jefferson Maternity Hospital. The enterprise was well patronized and nearly $5,000 was realized for the charity.

Hospital Buildings Dedicated.—Four new buildings of the Methodist Episcopal Hospital, erected at a cost of more than $120,000, were dedicated with appropriate ceremonies May 23. The new buildings are the Mary T. Hunter Home for Nurses, the Mary Burton Dispensary building, a new ambulance house and power plant.

Hospital Appointments.—Medico-Chirurgical Hospital, Drs. W. F. Keating, J. J. Moore, C. H. Elliott, S. H. Martin, H. B. Fraile, R. Nebinger and A. Swayne; Frankford Hospital, Drs. John J. Lynch and Thomas C. Ross; Jefferson Medical College Hospital, Drs. J. Howard Anderson, S. A. Munford, F. P. Herff, E. G. Maier, Wayne L. Snyder, L. F. Milliken and C. H. McCallum.

Keen Research Fellowship.—As a memorial to his wife, Dr. William W. Keen has founded the "Corinna Borden Keen Research Fellowship" at Jefferson Medical College, by a gift of $5,000 to the trustees. The fellowship will be awarded in 1907, and every two years thereafter, and the recipient must spend at least one year, in America or abroad, in some especial line of research work.

Commencement.—The annual commencement exercises of the Medico-Chirurgical College were held May 27. President Henry F. Walton conferred the degrees on a class of 85, and Hon. William N. Ashman delivered the doctorate address.——The eightieth annual commencement exercises of Jefferson Medical College were held June 2. The diplomas were presented to a class of 180 by Hon. William Potter, president of the board of trustees, and the oration was delivered by Rev. Dr. J. Andrews Harris.

Health Report.—The whole number of deaths for the week was 400, a decrease of 56 from the previous week and a decrease of 95 from the corresponding period of last year. The principal causes of death were as follows: Typhoid fever, 13; diphtheria, 6; epidemic cerebrospinal meningitis, 1; pulmonary tuberculosis, 46; cancer, 14; apoplexy, 21; heart disease, 34; acute pulmonary disease, 47; enteritis, 20, and Bright's disease, 33. There were 208 cases of contagious disease reported with 21 deaths, as compared with 193 cases and 19 deaths for the preceding week.

Hospital Elections.—The following were elected to compose the staff of the Jewish Maternity Hospital: Medical director, Dr. Isaac Leopold; consulting obstetricians, Drs. Lucy N. Tappan and Joseph Price; consulting surgeons, Drs. Lewis W. Steinbach and Charles P. Noble; consulting ophthalmologist, Dr. Isaac Leopold; consulting neurologist, Dr. Francis X. Dercum; consulting pathologist, Dr. David Riesman; consulting dermatologist, Dr. Jay F. Schamberg; consulting pediatrician. Dr. Eleanor C. Jones; obstetricians and gynecologists, Drs. Clara T. Dercum, Daniel Longaker. Helen Kirshbaum. Edwin A. Heller, Ludwig Loeb and Leo H. Bernd; pediatrician, Dr. L. Valentine Levi; dispensary physicians, Drs. Clara T. Dercum, Daniel Longaker. Helen Kirshbaum, Edwin A. Heller, Ludwig Loeb, Leo H. Bernd, Moses Behrend, I. Valentine Levi. Justin H. Schwerin, Ellis E. W. Given, D. A. Feldstein and Louis P. Steinhart, and resident physician, Dr. Elizabth F. Lewis.

WASHINGTON.

New Wings for State Hospital.—Ground was broken, May 12, for the new wings for the Western Washington Hospital for the Insane, Fort Stellacoom. The buildings will cost about $95.000.

Recommitted to Hospital.—Dr. B. H. Yount, Wilbur, who was committed to the Eastern Washington Hospital for the Insane, Medical Lake, on account of drug addiction and was released on parole in March, was recommitted to the hospital May 10.

Hospital Notes.—Work on the new $75,000 Deaconess' Hospital, Spokane, will begin this month. At first the east wing will be built. It will cost $14,000, of which the association has already $7,000 in hand.——A permit has been issued for the erection of a hospital at Ballard.——The Old Town Emergency Hospital, Tacoma, has been incorporated with a capital stock of $3,000.

Unlicensed Practitioner Fined and Imprisoned.—Dr. O. V. Lawson, who conducts a "medical institute" in Seattle, on April 29, was found guilty of practicing medicine without a license and was given the maximum penalty, a fine of $1[illegible] and imprisonment for 90 days in the county jail The prosecution of Lawson was at the instance of the King County Medical Society.

Personal.—Dr. Wilbur N. Hunt was confirmed, May 15, as health officer of Bellingham. Dr. Howard E. Henderson resigned.——The employes of the Granby Smelter, Grand Forks, presented Dr. E. R. Northrop with a silver loving cup, April 28, as a farewell token of regard. Dr. Northrop will practice in Spokane.——Dr. William H. Anderson, Medical Lake, has been appointed superintendent of the Eastern Washington Hospital for the Insane, vice Dr. W. James Howells, whose term expires in October.——Dr. Charles B. Stewart, Walla Walla, has been elected physician of Walla Walla County.

WYOMING.

Examiners Elect.—At the annual election of the State Board of Medical Examiners Dr. E. P. Rohrbaugh, Casper, was elected president; Dr. Samuel B. Miller, Laramie, secretary, and Dr. Oliver Chambers, Rock Springs, vice-president.

Sanatorium for Disabled Soldiers.—A bill has been introduced in the senate to appropriate $150,000 to establish a sanatorium at Thermopolis for disabled volunteer soldiers, and to appropriate an additional $20,000 for equipment of the institution and transportation of soldiers.

Cross Suits.—In the case in which Dr. Lawrence P. Desmond sued Mrs. Margaret Moore, Cheyenne, for professional fees, and in which Mrs. Moore filed a cross suit against Dr. Desmond for damages on account of alleged malpractice, in the treatment of a broken limb, the jury on May 24 gave Mrs. Moore a verdict for $199.50.

Personal.—Dr. John W. Padgett, Lander, has been appointed assistant surgeon, Wyoming national guard, with the rank of captain.——Ex-Governor Dr. Amos W. Barber, Cheyenne, was operated on for appendicitis in Omaha, May 20.——Dr. R. Harvey Reed, Rock Springs, who has been seriously ill for several months in Chicago and went to California to recuperate, is improving.

GENERAL.

Japanese and Trachoma.—It is reported that every month more than 25 Japanese suffering from trachoma are landed at San Francisco. They evade the immigration laws by a short residence in Hawaii, just long enough to obtain a passport to the United States.

Dr. Wyman Visits Hawaii.—Surgeon-General Walter Wyman of the United States Public Health and Marine-Hospital Service sailed Wednesday last on the transport *Sheridan* for Honolulu. He made a short visit in Chicago on his way West. He goes to consult with the governor of Hawaii and the Territorial Board of Health concerning the establishment of the station for the study of leprosy and its treatment. General Wyman will return in time to attend the Portland session of the American Medical Association.

FOREIGN.

Memorial to Von Esmarch.—The memorial to von Esmarch at Tönning, his birthplace, will be unveiled August 6. The principal address will be delivered by Professor Küster of Marburg.

Personal.—Dr. Edward H. Yume, Yale '97, and a graduate of Johns Hopkins University Medical School, has been appointed head of the medical department of the Yale College in Chungsha, China.

Smallpox in Sicily.—It is reported that there are about 60 cases of smallpox in Catania. The prefect of the city has ordered all the inhabitants to be vaccinated. Anyone refusing to comply with this order may be imprisoned or fined.

Koch in Africa.—Robert Koch is now in the interior of Africa, prosecuting his researches, and does not expect to return to the coast until the end of July. He is in the neighborhood of Iringa, and expects to return to Europe next spring.

Yellow Fever in Rio de Janeiro.—According to *Public Health Reports*, yellow fever is still present in Rio de Janeiro. Since January 1 there have been 198 cases of this disease, with 76 deaths. By far the greater number of deaths were among foreigners, and of 36 deaths in April, 31 were of other than natives of Brazil.

Low Birth Rate in London.—The registrar general's annual summary shows that London has lost over 36,000 lives through its falling birth rate, though it has saved 7,904, owing to the decline in the death rate. Roughly speaking, in London there are 25 per cent. fewer births than in 1870-72. In addition to this the report shows that for every seven children born one under the age of one year died.

Bequest to a Mexican Hospital.—It is reported that a wealthy young woman of Chihuahua, who is suffering from an incurable disease, has made a will endowing the Miguel Salas Hospital in Chihuahua with property valued at $2,000,000. The administration of this endowment will be in the hands of a commission with the governor of the state as chairman. It is provided that hospitals shall be established in other towns in the state of Chihuahua with funds arising from the endowment.

A Physician's Bequests to Medical Charities.—The will of the late Dr. Goburek of Tilsit, Germany, disposes of a large property, and most of it is given for benevolent purposes. It bequeathes $50,000 to the endowment fund for the orphans of physicians; the same amount to the fund for insurance of physicians; $25,000 to aid physicians in need; $50,000 to local benevolent institutions; $62,500 for loans without interest to women medical students, and nearly $40,000 to install public carbonated and hot baths.

Inoculation Against Plague in India.—An officer on plague duty, hearing that persons inoculated in 1902-3 were immune the following year instituted inquiries. In a group of twenty villages, among 34,680 persons who were not inoculated with antiplague serum, 2,040 cases of plague occurred, with 1,495 deaths. Among 11,059 persons who were inoculated only one case occurred; the patient died. Even allowing a liberal margin for error, says the *Public Health Reports*, this is a striking illustration of the prophylactic effects of year-old inoculations.

The Don Quixote Tercentennial.—Again the *Siglo Medico* of Madrid appears in gala dress, this time on account of the celebration of the tercentennial of the publication of Cervantes' Don Quixote, followed by the banquet tendered to the new cabinet minister, Dr. Cortezo, the co-editor of the *Siglo*. The medical faculty of the university arranged a public celebration in the San Carlos theater, with addresses on the medical features of Don Quixote. Ramon y Cajal was one of the speakers, and the entire proceedings were extremely interesting and elevating. The theater was crowded to the doors. The topics treated were recently mentioned in these columns.

Damage Suit in the Profession.—The *Progrès Médical* quotes a daily paper to the effect that for nearly a year the wealthy families of Berne have been receiving anonymous letters denouncing two of the best known physicians of the city with specific accusations. The two physicians suspected a certain confrère of the slanders, and sent a young man to offer him a lot of fine writing paper at a very low price. The paper had a private mark on it, and it was not long before the anonymous letters were found to be written on this very paper. The two physicians brought suit against the offender and he confessed at once and settled the damages for $20,000. The two physicians divided this sum among three local charitable institutions.

Duhrssen's Acquittal.—A suit has long been dragging through the German courts in which Professor Dührssen was sued for damages. He found it unexpectedly necessary to remove the uterus on account of uncontrollable hemorrhage when operating on a woman for the relief of sterility. The medical experts stated that he should have informed the patient beforehand of the possible danger of the operation, but the court decided that a physician is not legally bound to inform his patients in regard to the dangers of any affection or disease. In the present case he was unable to foresee the possible danger as all his similar interventions in the past had proceeded without mishap. The supreme court recently reaffirmed this decision so that the matter is finally settled in his favor.

Determination of Sex by Dieting.—A paper was read by Dr. Weill of Schwalbach at the recent German Congress of Internal Medicine in which he presented arguments in favor of his theory that the sex of the embryo is determined by the preponderating elements of the diet. He reported experiments with laboratory animals, bees and cattle which demonstrated that when carbohydrate elements predominated in the food more males than females were produced. If albuminoid elements predominated the female embryos were in the majority. He explains this as due to the fact that there is a constant struggle for supremacy between the male and female cell. Carbohydrate elements favor the male cell and albuminous elements throw the influence on the side of the female cell. Careful dieting, he believes, can thus effectually predetermine the sex of the offspring.

Roentgenology.—Before the Roentgen Congress at Berlin adjourned it adopted a resolution to the effect that the name of Roentgen should be perpetuated in every technical term referring to the use of the *x*-rays, as in Roentgen treatment, roentgenogram, to roentgenize, etc. Another resolution adopted by an almost unanimous vote was to the effect that the application of the Roentgen rays should be legally restricted to physicians, as belonging exclusively to the medical domain. This vote was taken after a communication from Hennecart of Sedan, who referred to the clinical and experimental research which has established that the Roentgen rays, applied to the ovary or testicle, render them rapidly and permanently sterile. The *Semaine Médicale* of May 17 has an interesting letter from the congress. It describes a large sarcoma of the skull as completely retrogressing under Roentgen exposures.

Prevention of Intoxication from Canned Vegetables.—Severe intoxication occured in a Darmstadt cooking school last year after the eating of a salad made from canned beans, as was mentioned in The Journal at the time. German authorities have had experts studying the subject since, and they now announce that there can be no doubt that fission fungi are able to develop in canned vegetables even when hermetically sealed. The toxic metabolic products of the fungi are liable to induce morbidity the same as the ptomains of meat. The toxin generating germs probably get on the vegetables from their being sprinkled or watered with water containing human excretions. All canned vegetables should be thoroughly heated before being eaten, to destroy any possible germs present. If the canned vegetables smell peculiarly—as was noticed in the case at Darmstadt—they should not be used at all, and certainly not as a salad without previous thorough heating.

Epidemic of Criminal Abortions in Paris.—A Paris exchange of recent date contains an article by Professor Mauclaire expatiating on the way in which the surgical wards are being crowded with women suffering from the effects of abortion. He says that almost a third of the patients in the surgical wards are cases of the febrile sequelæ of criminal abortion, generally autoabortion. Recent statistics by Paris obstetricians have shown that the number of abortions has more than tripled of late years in their experience, and in more than half of the cases the abortion was induced. The accoucheurs refuse to take the infected cases into their maternities for fear of infecting other patients, and the surgeons complain of this flood of infected material in their services. A special ward for this class of cases is being discussed. A surgeon is to be in charge, not an obstetrician, as the numerous consecutive measures possibly required call for the surgeon rather than the accoucheur.

The Visit of the British Physicians to Paris.—More than 200 physicians from the British Isles accepted the invitation of their French confrères to return the visit to London of the French physicians last year. The medical faculty received them May 10 in robes of state, and the dean in welcoming them remarked that science has no country, but its devotees have one: "In this common fatherland there is no persecution for political or religious opinions. War—that disgrace of mankind—is unknown. All work in common to enlarge the store of knowledge, to relieve distress and to prevent or cure disease. Fellow-citizens of this beloved fatherland, the English physicians are at home within the walls of this ancient medical college, and the walls greet you as friends long waited for." One of the receptions was held in "Washington Palace." The entire expenses of the two excursions to Vichy and Biarritz, by special train, were paid by the French. The *Lancet* for May 20 devotes 12 pages to a breezy letter describing the medical and other institutions of Paris visited by the party.

Spirobacteria in the Lesions of Syphilis.—The spirochæta which Schaudinn and Hofmann have recently reported as found constantly in syphilitic glandular lesions has been found by Metchnikoff in 4 out of 6 monkeys that had been successfuly inoculated with syphilis. He also found it in 4 out of 6 syphilitic young men, and was unable to detect it in other cutaneous lesions examined. Bordet and Gengou found a spirochæta in a syphilitic chancre and in throat lesions, as long ago as 1902, but did not venture to ascribe etiologic importance to it. Schaudinn and Hofmann were able to distinguish two varieties in the syphilitic lesions, one with sharper coils, more like those of a corkscrew, which they call the *S. pallida*. The other is larger, takes the stains better and its coil is more undulating. It is difficult to stain the *S. pallida* and it has thus far proved impossible to cultivate. It varies from 4 to 14 microns in length, while it is less than .25 micron in diameter, with 6 to 14 turns in its spiral. Their article is published in the *Deutsche med. Wochft.*, May 4, while Metchnikoff's communication on the subject was presented to the Paris Académie de Médecine, May 16. Buschke has since reported the finding of the same *Spirilla pallida* in large numbers in the spleen and liver of a four months' babe with inherited lues. Schaudinn and Hofmann's report was based on 8 cases.

LONDON LETTER.

The Centenary of the Royal Medical and Chirurgical Society.

The greatest though not the oldest of the London medical societies is about to celebrate its centenary. The Royal Medical and Chirurgical Society was founded in 1805 as an offshoot from the Medical Society of London, which was founded in 1773. Among its founders were Sir Astley Cooper, the surgeon; Dr. Matthew Baillie, the morbid anatomist; Dr. William Babington, the physician, and the celebrated Abernethey. In 1834 it obtained the charter by which it was constituted a royal society. In that year the president was Dr. Elliotson, a physician of University College Hospital, who fell into great disrepute because he took up and advocated mesmerism. In 1889 the society moved to its present stately and commodious premises, where a library of 40,000 volumes is housed. The transactions of the society now run to many volumes and contain much of the most important contributions to medical literature by English writers. They also contain much of the work which has rendered famous the names of Marshall Hall (the discoverer of reflex action), Bright, Addison, Jenner, Spencer Wells, Sir Henry Thompson, Kirkes (the discoverer of embolism), Liston's first operation for the removal of the scapula, Paget (the discoverer of trachina), and Hutchison. As previously reported in The Journal, the society is taking the leading part in the movement for confederating the medical societies of the metropolis.

Pharmacology

COUNCIL ON PHARMACY AND CHEMISTRY

American Medical Association.

OFFICIAL REPORT ON ACETANILID MIXTURES.

The following report has been approved by the Council:

To the Council on Pharmacy and Chemistry of the American Medical Association:

In response to the request of your chairman we have investigated the below-mentioned preparations and report as follows:

Specimens of the articles were bought in different cities in the open market, and in original, sealed packages, and were analyzed by some of us or under our direction. Each article was examined by at least two chemists, and some were subjected to several analyses. While certain of the preparations are represented as being chemical compounds, the specimens examined were all found to be mixtures; the principal ingredient being acetanilid. The percentage proportions of acetanilid given below are the minimum obtained by any of the analysts.

Soda and ammonia, combined with carbonic acid, are calculated and reported as sodium bicarbonate and as ammonium carbonate (U. S. P.), respectively. Salicylic acid is calculated and reported as sodium salicylate. Diluents and other constituents than those reported were not determined.

AMMONOL.

According to the analyses of the contents of the original sealed packages as purchased, this was found to be a mixture, and to contain the following ingredients approximately in the proportions given:

Acetanilid	Sodium Bicarb.	Ammonium Carb.
50.	25.	20.

ANTIKAMNIA.

According to the analyses of the contents of the original sealed packages as purchased, this was found to be a mixture, and to contain the following ingredients approximately in the proportions given:

Acetanilid	Caffein	Citric Acid	Sodium Bicarb.
68.	5.	5.	20.

KOEHLER'S HEADACHE POWDERS.

According to the analyses of the contents of the original sealed packages as purchased, this was found to be a mixture, and to contain the following ingredients approximately in the proportions given:

Acetanilid	Caffein
76.	22.

ORANGEINE.

According to the analyses of the contents of the original sealed packages as purchased, this was found to be a mixture, and to contain the following ingredients approximately in the proportions given:

Acetanilid	Sodium Bicarb.	Caffein.
43.	18.	10.

Other constituents said to be present were not determined.

PHENALGIN.

According to the analyses of the contents of the original sealed packages as purchased, this was found to be a mixture, and to contain the following ingredients approximately in the proportions given:

Acetanilid	Sodium Bicarb.	Ammonium Carb.
57.	29.	10.

Certain packages of phenalgin were purchased which on analysis did not show ammonium carbonate.

SALACETIN.

According to the analyses of the contents of the original sealed packages as purchased, this was found to be a mixture, and to contain the following ingredients approximately in the proportions given:

Acetanilid	Sodium Bicarb.	Sodium Salicylate.
43.	21.	20.

We recommend that this report be printed in The Journal of the American Medical Association.

Respectfully submitted,

J. H. Long, M.S., Sc.D.,
W. A. Puckner, Ph.G.,
S. P. Sadtler, Ph.D.,
J. Stieglitz, Ph.D.,
H. W. Wiley, M.D., Ph.D.

Committee on Chemistry,
Council on Pharmacy and
Chemistry of the A. M. A.

THE COAL-TAR PRODUCTS—ESPECIALLY ACETANILID.

The extensive use of acetanilid makes it of interest briefly to recite the origin and history of the coal-tar preparations. In the destructive distillation of coal, by heating it in a closed retort for the production of illuminating gas, there are produced various gases, the residual coke and the intermediary tar. From the latter are derived a great variety of products, consisting of several volatile liquids, principally benzene or benzol and toluene or tuluol, the so-called aromatic alcohols, phenol and cresol, a great variety of bases of the ammonia type, including anilin and the solid naphthalin, etc. Of these, phenol or carbolic acid first became generally known and was extensively employed as a disinfectant and antiseptic, followed shortly by salicylic acid, the first of the long series of medicinal chemicals produced synthetically from phenol, by a process patented by Kolbe, a German chemist, in 1868.

While anilin is found in small quantities in coal tar, not until it was produced artificially did it become important. By action on *benzene*, which is chemically phenyl hydrid (C_6H_6) (and which should not be confused with the liquid of similar name, but of low specific gravity, a mixture of low-boiling hydrocarbons obtained by fractional distillation from petroleum, called *benzin*, petroleum, ether or naphtha) the benzene molecule is changed into nitrobenzene ($C_6H_5NH_2$), called oil of mirbane or artificial oil of bitter almond, owing to its peculiar odor and flavor. When subjected to nascent hydrogen, the nitrobenzene is changed into anilin, phenylamin, or amidobenzene ($C_6H_5NH_2$), an oily liquid of strong basic properties which forms crystallizable salts with acids. It is from this liquid anilin that the numerous coal-tar dyes or colors are obtained. They are mostly highly colored and, as is well known, have almost superseded the vegetable dyes; the so-called azo-dyes; alizarin and even artificial indigo having been produced.

ACETANILID.

With acetic acid, however, anilin produces a colorless compound, and this crystallized salt obtained through interaction of anilin and acetic anhydrid is chemically phenyl-acetamid ($C_6H_5NH\ C_2H_3O$), or acetanilid (acetanilidum, U. S. P.). While known experimentally to Liebig and other chemists, it had received no attention until about 1888 when it was found that a synthetic chemical of German origin, introduced under the trade name antifebrin, was nothing but acetanilid. Since this preparation sold at $1.00 an ounce, and acetanilid could be produced for less than half that amount a pound, the monopoly of antifebrin was short lived; the medical and pharmaceutical journals soon making the fact of their identity widely known. Possibly because of this, but more especially because of the extravagant claims for antifebrin, and also because acetanilid bid fair to become a strong rival of antipyrin, and later of phenacetin, the opportunity was seized to use it as a base for certain mixtures under more or less deceptive names, suggestive of entirely new chemical compounds, and thus to exploit the medical profession through the most extravagant and absurd therapeutic claims, all for the purpose of foisting these inexpensive articles on physicians at exorbitant prices.

Acetanilid is distinguished by the so-called isonitrite reaction, viz.: On heating 0.1 gm. acetanilid with 5 c.c. solution of KOH (1 in 4) the characteristic odor of anilin is observed; by now adding 1 c.c. chloroform and again heating, the disagreeable odor of the poisonous phenyl isocyanid is evolved.

From the description of the properties of acetanilid, it was quickly recognized that associating it with an alkali would make the salt more soluble, thus insuring more uniform action. Sodium bicarbonate and subsequently ammonium carbonate were thus combined with the acetanilid in various proportions, and to this was sometimes added caffein. To make this mixture more soluble and also to mask the alkaline taste by partial neutralization some added citric acid also.

PHYSIOLOGIC ACTION.

The important physiologic action of acetanilid is to reduce temperature, probably by converting oxyhemoglobin into methemoglobin in the red corpuscles and by interfering with oxidation. In small doses, the action of the skin and kidneys is increased, the blood pressure is raised; this is probably brought about by contracting the smaller vessels by direct action on their muscular coat.

After large doses, the changes in the red blood corpuscles are so great that the effects are shown in the urine by the passage of altered blood. An urticarial rash is sometimes produced by its internal administration. According to White and Wilcox, it causes a fall in temperature, not by its action on the blood and circulation (as stated by Shoemaker) but by diminishing heat production through its action on the corpus striatum, which is said to be the center for heat production. To a slight extent, it increases heat dissipation, as has been shown by experiments. No effect on respiration is produced, according to Hare, except when it is given in large doses. When toxic doses are administered the breathing becomes rapid and labored and death may be produced by paralysis of the respiratory centers due to primary changes in the blood which so influence oxygenation of the tissues as to affect these centers. That the action of acetanilid is more pronounced on the blood than on any other part of the system is generally recognized. Consequently, its effects on the circulation, respiration, temperature and elimination are all probably secondary to the blood changes brought about by too large a dosage or by prolonged use. Under its continued use congestion of the liver, kidneys and spleen takes place. Hare has recorded a number of cases in which unfavorable signs have appeared after its use. The dose which most commonly produced the symptoms ranged from three to ten grains (gm. 0.20 to 0.65).

Dr. F. E. Clark[1] states that while it is a valuable medicament, there are certain dangers which have been more or less emphasized in the reports on this preparation, though no more than attend other preparations of the same class. In this connection he emphasizes the importance of care in its employment in the treatment of new patients whose constitutions and idiosyncrasies have not been properly studied, necessary precautions have not in all cases been observed in its administration, but in some cases it has been abused. Its value, on the other hand, according to this writer, has been overrated. As the chief untoward effects of acetanilid are on the heart and circulation as a depressant, he recommends that camphor be combined with it as a stimulant or that some form of liquor be used with it. He warns against the use of those proprietary preparations which are constituted principally of acetanilid and sodium bicarbonate as being dangerous to a lamentable extent, as soda is not a corrective of the dangers of acetanilid.

MEDICINAL USE.

Internally, acetanilid exerts an anodyne, sudorific, antipyretic and slightly soporific effect. He goes on to state that as an anodyne, acetanilid is very inferior to the well-established anodynes, no matter what the cause, and that in the treatment of "headaches" it must be remembered that the other ingredients combined with acetanilid are capable of curing the headache, such as caffein or guarana, potassium or sodium bromid. Consequently, he is of the opinion that too much credit is given to acetanilid. In incipient coryzas, in certain bronchial affections and in pharyngitis—called "colds" by the public—acetanilid acts very efficiently, given ordinarily in doses of from 3 to 5 grains (gm. 0.20-0.30) each and repeated every two or three hours until perspiration is established. Acetanilid, given in 5 grain (0.30) doses at bedtime, followed by a hot footbath and a hot lemonade, is superior, in Clarke's opinion, to quinin or Dover's powder.

As a soporific, it is of some value, but is less useful than the opiates. Externally employed, it acts aseptically and antiseptically. As an anodyne locally it is of less value than resorcin. As an aseptic, he claims, it is the equal of iodoform, and is devoid of the odor. He recommends it espeecially in the treatment of ulcers of the leg of the varicose variety.

ACETANILID POISONING.

That the use of acetanilid as a local application is not without its dangers has been demonstrated by a report of Manasses,[2] who mentions two cases of acute symptoms of poisoning following the free use of acetanilid as a dusting powder on abraded surfaces in young children. The usual toxic symptoms were produced, such as cyanosis, subnormal temperature and extreme prostration, which, however, were successfully combated by stimulants.

In regard to chronic acetanilid poisoning, we refer to the article by D. D. Stewart[3] in this issue.

It must be kept in mind in prescribing acetanilid mixtures that no action is produced by them on the cure of the disease. They are of value in the treatment of symptoms mainly, such as relieving pain and reducing temperature. Therefore, to obtain permanent results, other measures can be employed which are of greater value. In cases of fevers, according to von Jaksch, the patient is not made better by these drugs, but, on the other hand, convalescence is prolonged. The effects of antipyretics vary not only with the dose, but, as expressed by Cushny, with the individual patient. Many individuals can take without apparent harm, very large doses of these preparations, while in others minute quantities produce alarming symptoms.

Correspondence

Skipping Rope Fatalities.

Niagara Falls, N. Y., May 17, 1905.

To the Editor:—Referring to your editorial in The Journal, April 29, p. 1374, I desire to call your attention to the fact that when a girl jumps the rope to break a record the count is only for the number of times that the rope swings under the feet. While the rope is passing over the head and back to the feet a half jump takes place, thus giving the child her balance for the next spring that will throw her feet high enough to clear the rope again. Thus, in order to clear the rope 250 or more times, the same number of half-jumps are required. The succession of rope-jumps has a peculiar jar about it that is a harmful exercise for the body when long continued. When we consider also the rhythmic movement that must of necessity take place to perform such a feat, I think it will be easy to discover that the strain on the body would be like the strain on a long bridge in case an army of men were marched across it all in perfect marching step. It is the long continued unison jar or vibration that does the mischief. When the children *skip* the rope as they do when they run and let the rope pass under their feet as they step, there is no sudden jar to the body and, further, long runs are not made. It is my belief that rope-jumping should be discouraged by physicians. W. E. McChesney, M.D.

Chicago, May 23, 1905.

To the Editor:—Your point against rope-jumping is well taken. During a period of four years as medical inspector and medical advisor in certain Philadelphia schools I took every opportunity to discourage rope-jumping, and particularly for all girls over 11 years of age. My objection was that that exercise tended to cause displacement of the uterus of adolescent girls. I would urge physicians to discourage rope-jumping.

Winfield S. Hall, M.D.

Marriages

John M. Boyles, M.D., to Miss Agnes Mattes, both of Shelby, Mo., May 14.

Robert Wood, M.D., Washington, Ind., to Miss Stella Rogers of Indianapolis, April 1.

Bayard G. Keeney, M.D., to Miss Ethel Adams, both of Shelbyville, Ind., June 1.

James C. Mobley, M.D., to Miss Katie Sweets, both of Elizabethtown, Ky., June 1.

Edward A. Mayberry, M.D., Enid, Okla., to Mrs. Marie Herrman of Lacy, Okla., May 21.

Frederick C. Poehler, M.D., to Miss Eleanor Nesbitt, both of Minneapolis, Minn., June 1.

James William McEwan, M.D., to Miss Ethel Bowman, both of Detroit, Mich., May 17.

Harry Gaffield Irvine, M.D., to Miss Etta McCabe, both of Minneapolis, Minn., May 31.

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1. Boston Med. and Surg. Jour., November, 1904.
2. International Med. B

3. See page 1725.

Moore Moore, M.D., Memphis, Tenn., to Miss Ethel Sara Sivley of Jackson, Miss., June 1.

Thomas H. Baer, M.D., Defiance, Iowa, to Miss May Miller of Kenwood Park, Iowa, May 20.

Robert Blackburn Love, M.D., Livingston, Texas, to Miss Ola Greer of Goodrich, Texas, May 10.

John H. O'Dell, M.D., Three Rivers, Mich., to Miss Lou Harvey of Constantine, Mich., May 17.

Nicholas Albert Baltzell, M.D., Marianna, Fla., to Miss Edith Schmelz of Hampton, Va., June 1.

Earl McDonald Rusk, M.D., Villa Ridge, Mo., to Miss Effie Mabel Simpson of Moselle, Mo., May 17.

John Ward Shults, M.D., Wichita, Kan., to Miss Eudora Florence Underwood of Bowling Green, Ohio.

James B. Angle, M.D., to Mrs. Mary E. Garrett, both of Greensboro, N. C., at Danville, Va., May 16.

Paul C. Bridgham, M.D., to Miss Gertrude Rosamond Murray, both of Cohasset, Mass., at Boston, April 19.

Deaths

Carl H. A. Kleinschmidt, M.D. University of Georgetown Medical Department, Washington, D. C., 1862, a member of the American Medical Association, its librarian from 1883 to 1890, a member of the Medical Society of the District of Columbia, who had held every office in its gift; a member of the Medical Association of the District of Columbia and its president in 1895; first president of the Board of Medical Examiners; for 14 years a member of the board of police surgeons; professor of physiology in the University of Georgetown from 1876 to 1902; one of the oldest and most prominent physicians of Washington; a veteran of the Civil War, died at his home in Washington, May 20, from general debility, aged 66.

Andrew W. McClure, M.D. Medical College of Ohio, Cincinnati, 1853, a member of the American Medical Association; some-time president of the Iowa State Medical Society, and of the district and county medical societies; surgeon of Fourth Iowa Volunteer Cavalry in the Civil War; for many years a member of the Board of Commissioners of Insanity of Henry County; trustee of the Iowa Hospital for the Insane, Mount Pleasant, died at his home in Mount Pleasant, May 21, after a long illness, aged 77. The physicians of the city served as honorary pall bearers and the members of the Grand Army post acted as escort at the funeral.

William Minturne Line, M.D. Jefferson Medical College, Philadelphia, 1851, a member of the American Medical Association, for many years a practitioner of Nebraska City, Neb., died suddenly from heart disease at his home in Aberdeen, S. D., May 9, after a long period of ill health, aged 81. The members of the medical profession of Aberdeen acted as pall bearers at the funeral.

Louis Fielding High, M.D. College of Physicians and Surgeons, Baltimore, 1891, a member of the state medical societies of Virginia and North Carolina and founder of the Pineshire Sanitarium at Southern Pines, N. C., died in a hospital in New York City, May 3, from sarcoma of the neck, after an illness of two months, aged 38.

William Stoner Kidd, M.D. Bellevue Hospital Medical College, New York City, 1898, formerly acting assistant surgeon, United States Army, but for the last year a resident of Arizona, and physician of the Arizona Coffee Company at Morenci, died at Tucson, March 12, from tuberculosis, aged 30.

Erwin Fischer, M.D. University of Tübingen, Germany, 1887 for several years surgeon on the North German Lloyd Steamship Line, and assistant physician of the Tübingen Hospital, died from abscess of the brain at his home in Pittsburg, Pa., May 21, after an illness of five weeks, aged 40.

Charlotte E. Mastin, M.D. University of Buffalo Medical Department, 1897, a member of the American Medical Association, and a prominent young practitioner of Wellsboro, Pa., died in the Buffalo General Hospital, May 20, a day after an operation for peritonitis, aged 33.

Jacob H. Asch, M.D., University of Berlin, Germany, 1864, a member of the American Medical Association, one of the best known German physicians of New York City, died at his home, May 19, from cerebral hemorrhage after an illness of only a few hours, aged 66.

Henricus W. Westlake, M.D. University of the Victoria College, Coburg, Ont., 1887, of Los Angeles, Cal., died at the Good Samaritan Hospital in that city, May 12, after an illness of five weeks, two days after an operation for abscess of the lungs, aged 48.

Henry Ward Chamberlain, M.D. College of Medicine and Surgery of the University of Minnesota, Minneapolis, 1901, died at his home in Bangor, Wis., May 21, from sarcoma of the testis, after an illness of nearly a year, aged 30.

Joseph Johnson, M.D. College of Physicians and Surgeons in the City of New York, 1877, died at his home in New Richmond, Wis., February 17, from cancer of the throat, after an illness of six months, aged 82.

Frank A. Xanten, M.D. State University of Iowa College of Medicine, Iowa City, 1876, of St. Paul, Minn., died at St. Joseph's Hospital in that city, May 17, from acute uremia, after a short illness, aged 51.

William Harry Longsdorph, M.D. Jefferson Medical College, Philadelphia, 1856, formerly treasurer of Cumberland County, Pa., a veteran of the Civil War, died at his home in Camp Hill, Pa., May 23, aged 71.

Henry Judy, M.D. Cincinnati, 1850, president of the Midland National Bank, Washington Court House, Ohio, died at his home in that city, March 9, after an illness of several years, from uremia, aged 76.

Leander L. Tidball, M.D. University of Michigan Department of Medicine and Surgery, Ann Arbor, 1874, died suddenly at his home in Monticello, Ill., from heart disease, May 19, aged 58.

Maude A. Thompson-Miller, M.D. American Medical Missionary College, Chicago, 1902, died from psilosis, at her station in Hunan, China, March 14, after an illness of eight months, aged 24.

Jephtha B. Pettijohn, M.D. Medical College of Indiana, Indianapolis, 1870, committed suicide in his office at Noblesville, Ind., by cutting his throat while despondent, May 17, aged 57.

Maude Miller, M.D. Woman's Medical College of the New York Infirmary, New York City, 1899, died at her home in Greenpoint, Brooklyn, N. Y., May 22, from pneumonia, aged 30.

Frank P. Frisbee, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1881, died at his home in Alden, Iowa, May 20, from hypertrophy of the liver and spleen, after a long illness.

Edward D. L. Parker, M.D. Ohio, 1867, for many years a practitioner of Providence, R. I., died at his summer home in Nayatt, R. I., May 13, from angina pectoris, aged 62.

John H. Rippey, M.D. Rush Medical College, Chicago, 1891, of Kingsley, Iowa, died at La Junta, Colo., May 15, from consumption, after a long illness.

Ellis M. Kessinger, M.D. Hospital College of Medicine, Louisville, 1891, died at his home in Sandborn, Ind., after a long illness, May 21, aged 47.

Richard L. Tydings, M.D. Hospital College of Medicine, Louisville, 1882, died at his home in Jefferson County, Ky., May 19, after a short illness.

William A. Laflin, M.D. Rush Medical College, Chicago, 1867, died at Clearwater, Neb., March 22, from pneumonia, after an illness of one week, aged 67.

Marion Crowell, M.D. Macon (Ga.) 1858, died at his home in Solgohachie, Ark., April 23, from senile debility, after an illness of four days, aged 75.

William H. Brown, M.D. Illinois, 1893, of Butler, Pa., died at his parents' home in Brownsdale, Pa., May 21, after a long illness, aged 42.

Horace F. Webster, M.D. Bellevue Hospital Medical College, New York City, 1883, died at his home in Harrison Valley, Pa., May 2, aged 45.

George W. Blend, M.D. Eclectic Medical Society, N. Y., 1874, died suddenly at his home in Oneonta, N. Y., May 22, aged 77.

Francis D. Gridley, M.D. Philadelphia, 1866, died at his home in Binghamton, N. Y., May 19, after a short illness, aged 71.

Edward I. J. Wortham, M.D. Kentucky School of Medicine, Louisville, 1859, died at his home in Hot Springs, Ark., May 23.

Henry Biggs, M.D. Memphis (Tenn.) Medical College, 1849, died at his home in Grand Junction, Tenn., May 16, aged 83.

John Smithwick, M.D. Albany (N. Y.) Medical College, 1869, of Sharon, Mass., died at the town farm, May 21, aged 66.

Lon D. Hockett, M.D. Cincinnati, 1881, died at his home in Whittier, Cal., May 14, after a long illness, aged 50.

Deaths Abroad.

S. von Basch, M.D., professor of experimental pathology at Vienna and author of numerous works on the physiology and pathology of the circulation, on dysentery, innervation of the uterus, histology of the intestines, etc., and inventor of a sphygmomanometer, died at Vienna, May 1, aged 68. He accompanied Maximilian to Mexico in 1865 as his body physician, but returned to Vienna after his execution.

T. Bornhaupt, M.D., professor of surgery at Kiev, died there March 9, aged 63. He had published a number of important works on surgical subjects, the latest being a monograph on surgical affections of the hip joint and thigh, which forms part of the Russian work, "Russian Surgery," now in press.

Miscellany

CLIPPINGS FROM LAY EXCHANGES.

Bacteriologic Symptoms.

"Professor ——— is at the hospital. . . . He had a tooth pulled and inflammation developed in the jaw, with bacteriologic symptoms."—*Minneapolis Journal.*

Antonio's Rubber Tubes.

"A peculiar and extremely delicate . . . operation has been performed . . . to save the life of Antonio ———, whose stomach was partially torn out by a dynamite explosion. Coils of rubber tubing were inserted in place of his injured intestines."—*Boston Evening Herald,* Nov. 29, 1904.

The New Pathology.

"En route there he became ill with pulmonary peritonitis."—*Cincinnati Enquirer,* Dec. 29, 1904.

"Dr. ——— . . . died suddenly of pleurisy of the brain, at his late residence. . . . —*Cincinnati Enquirer,* Nov. 9, 1904.

"She had a stricture of the esophagus or 'swallow,' and . . . she was in fact dying of bodily starvation."—*Charleston* (W. Va.) *Advocate,* April 6, 1905.

"Mr. ——'s death was due to sorosis of the liver."—*Pittsburg Commercial Gazette,* Sept. 19, 1904.

A Double-Back-Action Sneeze.

"John ——— sneezed so hard to-day that he doubled himself up and has not straightened up yet. Two doctors have been with him since the sneeze was let loose. . . . He sneezed hard, bending his head to relieve the tension. . . . When he tried to straighten up he could not. . . . The doctors say that the spasm of the diaplerague resulting from the sneeze caused the vertebrae to snap, but they hope to be able to straighten him out again."—*St. Paul* (Minn.) *Pioneer Press,* Dec. 11, 1904.

Bonafide Bonification of Bone.

"Rev. —— . . . is dead of a peculiar disease—ossification of the tissues of the bone. Two operations were performed . . . but blood poisoning had set in and death followed last evening."—*Philadelphia Evening Bulletin,* April 20, 1905.

"*May Cripple—Ossification of Bone Threatened as Result of Term in Prison.*—Washington, May 18. An affidavit of a New York physician stated that Mrs. —— is suffering with rheumatism of the knee and is threatened with ossification of the bone."—*Chicago Record-Herald,* May 19, 1905.

Diagnosis Alone Worth the Money.

"On examination I found an indurated condition of the entire cervical region producing an external pressure on the medulla oblongata, creating an inflammation in the fourth ventricle, extending along the longitudinal fissure, corpus callosum and its peduncles, lamina cinerea, olfactory tract, fissure of sylvius and the anterior perforated space, involving secondarily the optic commissure, tuber cinereum, infundibulum, pituitary body, corpora albicantia, posterior perforated space and the cruri cerebri; hence the incoordinations of the muscular system, loss of speech, locomotion and ptosis of the eyelid after an attack of blinding headache." Case report in osteopathic advertisement, *Chicago Evening Journal.*

Queries and Minor Notes

NORMAL SALT SOLUTION.

Las Animas, Colo., May 27, 1905.

To the Editor: Please answer the following questions through the columns of The Journal: 1. What is a "normal salt solution"? 2. What is a standard up-to-date work on typhoid fever?

X. Y.

Answer.—1. Normal salt solution is a .6 per cent. solution of sodium chlorid in sterilized water. 2. Every good text-book on practice covers the subject of typhoid fever thoroughly. Many monographs have been written on this subject, and one of the best is that entitled "Typhoid and Typhus Fevers" by Curschmann of Leipsic, edited by Osler, in Nothnagel's Encyclopedia of Practical Medicine. This work is published by W. B. Saunders & Co., Philadelphia; price $5.00.

VARICOSE VEINS.

——, Colo, May 25, 1905.

To the Editor:—Please give me name and address of Chicago surgeons who are authorities on the subject of varicose veins of the lower limbs. 2. Please inform me also whether any treatise on this condition can be obtained, other than the articles found in the general works on surgery.

B. T. W.

Answer.—1. It would be invidious to mention names here, as all first-class surgeons are presumed to be authorities on this subject. 2. We know of no work on varicose veins published in book form, but we refer you to the following articles which have appeared in leading medical journals: "Surgical Treatment of Varicose Veins," by C. H. Mayo, Rochester, Minn., *St. Paul Medical Journal,* September 1904; abstracted in The Journal, September 24, 1904, p. 917. "The Remote Results of Operations for Varicose Veins of the Lower Extremities," by Robert Kennedy, *British Medical Journal,* Oct. 29, 1904; abstracted in The Journal, Nov. 19, 1904, p. 1584. "Local Treatment for Varicose Ulcers," by F. Fletcher, *Columbus Medical Journal,* March, 1904; abstracted in The Journal, April 16, 1904, p. 1049. "Nature and Treatment of Varicose Veins," by G. R. Johnson, *Medical Times,* New York, May, 1904. "Some Further Points Relating to Varicose Veins of the Lower Limbs," by Sir William H. Bennett, *The Lancet,* Nov. 22, 1902; abstracted in The Journal, Dec. 13, 1902, p. 1554. "Operative Treatment of Varicose Veins," by J. B. Blake, *Boston Medical and Surgical Journal,* Sept. 25, 1902; abstracted in The Journal, Oct. 11, 1902, p. 936.

State Boards of Registration

COMING EXAMINATIONS.

Minnesota State Board of Medical Examiners, Old State Capitol Building, St. Paul, Minn., June 6-8. Secretary, C. J. Ringnell, M.D., Minneapolis.

Board of Medical Examiners of Wyoming, State Capitol, Cheyenne, June 7. Secretary, S. B. Miller, M.D., Laramie.

Michigan State Board of Registration in Medicine, The Capitol, Lansing, June 13. Secretary, B. D. Harison, M.D., Sault Ste. Marie.

State Board of Medical Registration and Examination of Ohio, Cleveland, Columbus and Cincinnati, June 13-15. Secretary, Frank Winders, M.D., Columbus.

Board Representing the President and Fellows of the Medical Society of Delaware, Dover, June 20-22. Board Representing the Homeopathic Medical Society of Delaware, Wilmington, June 20-22. Secretary of the Medical Council of Delaware, P. W. Tomlinson, M.D., Wilmington.

State Board of Medical Examiners of New Jersey, Trenton, June 20-21. Secretary, E. L. B. Godfrey, M.D., Camden.

Medical Examining Board of Virginia, Richmond, June 20-24. Secretary, R. S. Martin, M.D., Stuart.

Board of Medical Examiners of Maryland, Baltimore, June 21-24. Secretary, J. McP. Scott, M.D., Hagerstown.

Medical Council of Pennsylvania, Philadelphia and Pittsburg, June 27. Secretary of the Medical Council, H. C. Shaeffer, M.D., Harrisburg.

Board of Medical Examiners, Central District, I. T., South McAlester, I. T., July 3. Secretary, B. W. Caldwell, Hugo.

Board of Medical Examiners of Arizona, Phoenix, Ariz., July 3-4. Secretary, A. Martin, Phoenix.

Utah State Medical Examiners, Salt Lake City, Utah, July 3-4. Secretary, R. W. Fisher, Salt Lake City.

North Dakota State Medical Examining Board, Grand Forks, July 5. Secretary, H. M. Wheeler, Grand Forks.

State Medical Examining Board of Washington, Seattle, Wash., July 5. Secretary, C. W. Sharples, Seattle.

State Medical Examining Boards of the Regents, State House, Concord, N. H., July 7-8. Regent, H. C. Morrison, Concord.

State Medical Board of the Arkansas Medical Society, Little Rock, July 11. Secretary, J. P. Runyan, Little Rock.

Rhode Island State Board of Health. State House at Providence, commencing at 9 a. m., July 11. Secretary, G. T. Swarts, State House, Providence.

Wisconsin Board of Medical Examiners, Park Hotel, Madison, Wis., July 11. Secretary, F. A. Forsbeck, Milwaukee.

State of Connecticut Medical Examining Board, City Hall, New Haven, Conn., July 11-12. Secretary, C. A. Tuttle, New Haven.

Maine Board of Registration of Medicine, State House, Augusta, Maine, July 11-12. Secretary, Wm. J. Maybury, Saco.

Vermont State Board of Medical Registration, Y. M. C. A. Hall, Burlington, Vt., July 11-12-13. Secretary, W. Scott May, Underhill.

Kansas State Board of Medical Registration and Examiners, State House, Topeka, Kan., July 12-13. Secretary, G. F. Johnston, Lakin.

South Dakota Board of Medical Examiners, Sioux Falls, S. Dak., July 12-13. Secretary, H. E. McNutt, Aberdeen.

Board of Medical Supervisors, Washington, D. C., July 13. Secretary, Wm. C. Woodward, Health Department, Washington.

California State Board of Medical Examiners, San Francisco and Los Angeles, Cal., July 19. Secretary, C. L. Tisdale, San Francisco.

District of Columbia April Report.—Dr. W. Woodward, secretary of the Board of Medical Supervisors of the District of Columbia, reports the oral and written examination held at Washington, April 13-16, 1905. The number of subjects examined in was 17; total number of written questions, 80; percentage required to pass, 75. The total number of persons examined was 10, of whom 5 passed and 5 failed. The following colleges were represented:

College.	Year Grad.	Per. Cent.
PASSED.		
George Washington University	(1905)	77.250
Columbian University	(1904)	83.031
Georgetown University	(1904)	78.594
Howard University	(1904)	80.688
Johns Hopkins University	(1902)	80.656
FAILED.		
College of P. & S., Chicago	(1904)	53.688
George Washington University	(1904)	72.219
Howard University*	(1904) 63.656; (1903)	56.688
University of Maryland*	(1904)	61.406

* Second examination.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, for the week ending May 27, 1905:

Torney, George H., deputy surgeon general, ordered, in addition to present duties at Army General Hospital, Presidio of San Francisco, to take charge of the chief surgeon's office, department of California, during the absence of the chief surgeon on leave.

Girard, Jos. B., asst.-surgeon general, relieved from duty in Philippines division, to proceed by first available transport to San Francisco, and on arrival there to report to the military secretary of the Army for orders.

Byrne, Chas. B., asst.-surgeon general, relieved from duty as chief surgeon of the department of Missouri, and ordered to Manila, P. I., for duty as chief surgeon, Philippines division.

Truby, Willard F., asst.-surgeon, relieved from duty at Fort Preble, Me., and ordered to Fort Niagara, N. Y., for duty.

Jones, Percy L., asst.-surgeon, relieved from duty at Fort Monroe, Va., and ordered to Fort Preble, Me., for duty.

Shimer, Ira A., asst.-surgeon, relieved from duty at Fort Niagara, N. Y., and ordered to report in person to Secretary of War for further orders.

Mearns, E. A., surgeon, ordered to proceed from Washington, where on leave, to Fort Sill, O. T., to accompany First Squadron Eighth Cavalry to Manila, P. I., and on arrival to report to commanding general, Philippines Division, for assignment to duty.

Bispham, Wm. N., asst.-surgeon, reports as in temporary charge of chief surgeon's office, Department of Colorado, during the absence of chief surgeon on inspection duty.

Comegys, Edward T., deputy surgeon general, retired from active service at his own request, on account of thirty years' service, to take effect July 1, 1905.

Collins, C. C., asst.-surgeon, granted three months' leave of absence, to take effect when relieved from duty in Philippine Islands.

Brooke, Roger, Jr., asst.-surgeon, granted three months' leave of absence, to take effect about Aug. 1, 1905.

Borden, Wm. C., surgeon, ordered to New York City, to consult with architects regarding plans for the new Army General Hospital to be constructed in Washington.

Bushnell, Geo. E., surgeon, granted 15 days' leave of absence.

McAndrew, P. H., asst.-surgeon, reports at Arcadia rifle range for temporary duty.

Richards, R. L., asst.-surgeon, having recently arrived from Manila, P. I., will report at Fort Mason, Cal., for temporary duty during the absence of Assistant-Surgeon Murtagh, and in addition to this duty, he will act as attending surgeon and examiner of recruits at San Francisco, Cal.

Murtagh, John A., asst.-surgeon, ordered to accompany Second squadron 13th Cavalry from Presidio of San Francisco, Cal., to Fort Myer, Va., on completion of which he will return to his proper station.

Craig, Charles F., asst.-surgeon, ordered to accompany First Squadron 13th Cavalry from Presidio of San Francisco, Cal., to Fort Riley, Kans., on completion of which he will return to the U. S. Army Transport *"Logan."*

Brooks, Wm. H., asst.-surgeon, granted two months' and fifteen days' leave of absence.

McCulloch, C. C., Jr., surgeon, detailed as a member of board of medical officers to meet at West Point, N. Y., for examination of cadets' graduating class and other cadets, instead of Assistant-Surgeon Ekwurzel.

Hutton, Paul C., asst.-surgeon, leave of absence further extended 14 days.

Webb, Walter D., asst.-surgeon, granted three months' leave of absence.

McAlister, John A., dental surgeon, ordered to Fort Rosecrans, Cal., for temporary duty.

Dade, Waller H., contract surgeon, relieved from duty at Fort D. A. Russell, Wyo., and ordered to Fort DuChesne, Utah, for duty.

McCall, James H., contract surgeon, returned to duty at Fort Smallwood, Md., from leave of absence.

Coffee, Albion McD., contract surgeon, relieved from duty at Fort Worden, Wash., and from temporary duty at Fort Lawton, Wash., and ordered to Fort Davis, Alaska, for duty.

Kelly, John P., contract surgeon, granted leave of absence for four months, to take effect July 7.

Ware, William H., dental surgeon, left Fort Hauchuca, Ariz., for temporary duty at Fort Grant, Ariz.

Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending June 27, 1905:

Anderson, F., medical inspector, ordered to report to the commanding officer, Marine Barracks, Washington, D. C., for duty at those barracks.

Cordeiro, F. J. B., surgeon, ordered to the *Yankee*, sailing from New York about June 7.

Wieber, F. W. B., surgeon, detached from the *Prairie* when put out of commission, and ordered home to wait orders.

Gatewood, J. D., surgeon, detached from the *Yankee*, and ordered home to wait orders.

Stokes, C. F., surgeon, ordered to additional duty as a member of the Anatomical Board of the District of Columbia.

Warner, R. A., asst.-surgeon, ordered to the Naval Hospital, Philadelphia.

Stalnaker, P. R., asst.-surgeon, ordered to the Naval Hospital, New York.

Pugh, W. S., Jr., asst.-surgeon, detached from the *Prairie*, and ordered to the Naval Station, Guantanamo, Cuba, with additional duty on the *Monongahela*, sailing from New York, about June 2.

Grayson, C. T., asst.-surgeon, detached from the Marine Barracks, Washington, D. C., and ordered to the *Maryland*.

Hoyt, R. E., asst.-surgeon, detached from the *Texas*, and ordered home to wait orders.

Brown, H. L., asst.-surgeon, detached from the Naval Station, Guantanamo, Cuba, and ordered to the *Texas*.

Shaw, H., asst.-surgeon, detached from the *Yankee* and ordered home to wait orders.

Zalesky, W. J., asst.-surgeon, detached from the Naval Academy and ordered to the *Yankee*, sailing from New York June 7.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending May 24, 1905:

Stoner, G. W., surgeon, three days' leave of absence from May 17, 1905, under Paragraph 189 of the Regulations.

Mathewson, H. S., P. A. surgeon, granted leave of absence for two months from June 16, 1905.

McClintic, T. B., P. A. surgeon, to proceed to Berkeley Springs and other points in West Virginia for special temporary duty.

Spratt, R. D., asst.-surgeon, to proceed to Cleveland, Ohio, and assume temporary charge of the station during the absence on leave of P. A. Surgeon H. S. Mathewson.

Long, H. D., asst.-surgeon, to proceed to Ellis Island, N. Y., and report to Surgeon G. W. Stoner for duty.

Olsen, E. T., asst.-surgeon, to proceed to Ellis Island, New York, and report to Surgeon G. W. Stoner for duty.

Miranda, R. U. L., acting asst.-surgeon, granted leave of absence for thirty days from June 1.

Wakefield, H. C., acting asst.-surgeon, granted leave of absence for ten days from May 27.

Roehrig, A. M., pharmacist, granted leave of absence for 5 days from May 19, 1905, under paragraph 191 of the regulations.

BOARD CONVENED.

Board to meet at San Francisco, May 19, 1905, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board: Surgeon G. M. Magruder, chairman; P. A. Surgeon D. H. Currie, recorder.

APPOINTMENTS.

Dr. Henry D. Long of Pennsylvania, and Dr. Egil T. Olsen, of Illinois, commissioned (recess) as assistant surgeons in the Public Health and Marine-Hospital Service.

Dr. Charles E. Fisher appointed acting assistant surgeon in the Public Health and Marine-Hospital Service, for duty at Toledo, Ohio.

Health Reports.

Health Reports: The following cases of smallpox, yellow fever and plague, have been reported to the Surgeon General, Public Health and Marine-Hospital Service, during the period from May 20 to May 26, 1905:

SMALLPOX—UNITED STATES.

District of Columbia: Washington, May 13-20, 2 cases.

Florida: Jacksonville, May 13-20, 2 cases.

Illinois: Chicago, May 13-20, 6 cases, 2 deaths; Galesburg, April 13-20, 1 case.

Kentucky: Covington, May 13-20, 9 cases.

Louisiana: New Orleans, May 13-20, 4 cases imported.

Massachusetts: Lowell, May 13-20, 2 cases.

Michigan: Ann Arbor, April 29-May 6, 1 case.

Missouri: St. Joseph, May 6-20, 40 cases; St. Louis, May 13-20, 5 cases.

New Hampshire: Nashua, May 13-20, 2 cases.

New York: Kingston, May 13-20, 1 case; New York, May 13-20, 1 case 1 death.

Ohio: Cincinnati, May 5-19, 7 cases; Toledo, May 6-13, 1 case.

Pennsylvania: Altoona, May 13-20, 1 imported case, York, May 13-20, 12 cases.

South Carolina: Greenville, May 13-20, 4 cases, 2 deaths.

Tennessee: Memphis, May 13-20, 1 case; Nashville, May 13-20, 4 cases.

Wisconsin: La Crosse, May 13-20, 1 case; Milwaukee, May 13-20. 2 cases.

SMALLPOX—FOREIGN.

China: Hong Kong, April 1-8, 7 cases, 3 deaths.

France: Paris, April 29-May 6, 21 cases 1 death.

Great Britain: Bradford, April 22-May 6, 12 cases; Toledo, May 6-13, 1 case; London, April 29-May 6. 4 cases.

India: Bombay, April 17-25, 76 deaths.

Italy: Catania, May 6-11, 8 deaths; Palermo, April 22-29, 8 cases.

Malta: April 22-29, 1 death.

Russia: Moscow, April 15-29, 10 cases, 5 deaths.

Spain: Barcelona, April 20-30, 6 deaths.

West Indies: Barbadoes. May 9, 1 case among laborers for canal zone, probably imported; Grenada, April 20-May 4, 2 cases.

YELLOW FEVER.

British Honduras: Belize, May 24, 2 cases, 1 death.

Honduras. Puerto Cortez. May 25, 4 cases, 1 death.

Mexico: Tierra Blanca, May 7-13, 1 case, 1 death.

Panama: Panama, Jan. 1-May 13, 61 cases, 22 deaths.

PLAGUE.

Arabia: Aden, April 14-28, 19 cases, 8 deaths.

Australia: New Castle, April 13, 4 cases 1 death.

Chile: Santiago, April 16-28, 2 cases.

China: Hongkong, April 1-8, 3 cases, 3 deaths.

India: General, April 1-8, 59,227 cases, 52,841 deaths; Bombay, April 18-25, 1,018 deaths.

Japan: Formosa, March 1-31, 284 deaths: April 1-20, 272 deaths.

Straits Settlements· Singapore, April 1-15, 5 deaths.

Medical Organization

Kentucky.

Lawrence County Medical Society.—On May 13 Dr. James W. Kincaid, Catlettsburg, and Lester Keller, Ironton, Ohio, met physicians of the county at Ashland and assisted in the organization of a county society. Dr. Andrew J. Hillman, Glenwood, was elected president; Dr. John J. Gambill, Jr., Martha, vice-president; Dr. J. C. Bussey, Louisa, secretary, and Dr. Morton G. Watson, Louisa, treasurer.

Ohio.

Auglaize County Medical Society.—This society was organized at Wapakoneta, May 25, with 29 charter members. The following officers were elected: President, Dr. Charles H. Phelps, St. Mary's; vice-president, Dr. Henry E. Fledderjohann, New Knoxville; secretary, Dr. C. Ludwig Mueller, Wapakoneta; treasurer, Dr. Franklin C. Hunter, Wapakoneta, and censors, Drs. Simpson N. Ekermeyer, New Bremen; Charles C. Berlin, Wapakoneta, and Bert E. Thomas, St. Mary's.

Pennsylvania.

Luzerne County Medical Society.—At a special meeting held in Wilkesbarre, May 24, Dr. J. N. McCormack delivered an address on organization.

Clearfield County Medical Association.—At the meeting of the society May 15, at Clearfield, an address on organization was made by Dr. J. N. McCormack.

Clinton County Medical Association.—On May 16 this association gave a banquet at Lock Haven in honor of Dr. J. N. McCormack, who addressed the meeting on the need of closer organization.

Northampton County Medical Society.—At the meeting in Pen Argyle, May 21, Dr. J. N. McCormack addressed the society on the necessity of thorough organization and unity of the medical profession.

Northumberland County Medical Society.—Dr. J. N. McCormack addressed the members of this society, and also the members of Montour County Medical Society at Sunbury, May 17. His object was organization.

Snyder County Medical Society.—The physicians of Snyder County met at Middleburg, May 18, and after a full discussion of the subject of organization by Drs. Luther B. Kline, Catawissa, censor for the district; Dr. G. A. Stack, president of the Montour County Society, Dr. J. N. McCormack of Kentucky and others, a promising society was formed under the standard constitution and by-laws. The following officers were elected: President, Dr. Benjamin F. Beale, McKee's Half Falls; vice-presidents, Drs. William W. Longacre, Mount Pleasant Mills, and Charles G. Smith, Beaver Springs; secre- tary and reporter, Dr. A. J. Hermann, Middleburg; treasurer, Dr. Frank J. Waynesellet, Selins Grove, and censors, Drs. H. M. Nipple, Selins Grove; B. F. Waynesellet, Selins Grove; John O. Wagner, Beaver Springs, and Marand Rothrock, Mount Pleasant Mills.

A Call for Organization.—Dr. J. N. McCormack of Bowling Green, Ky., chairman of the Organization Committee of the American Medical Association, addressed the Medical Society of Philadelphia, Chester and Delaware Counties in the College of Physicians, May 26. Dr. McCormack urged the necessity of organization among physicians all over the United States. He said that the physicians of our own state received less compensation for their services than in any other section of the country. Things have come to such a pass in the medical profession, he said, that there is a large class of ill-supported and hence ill-informed and ignorant physicians, whose antiquated methods do their communities and the profession at large more harm than good. The reason is that physicians do not get paid for their services. They work harder than any other class of men, and yet even well-to-do people employ them without even thinking it necessary to compensate them. There should be up-to-date organizations all over the country, particularly in this state, to lift up to the light struggling physicians who do not now earn enough to support their families or even to obtain the necessary standard literature. In Kentucky organization has been effected to make a uniform fee schedule.

Virginia.

Medical Society of Northern Virginia.—At a meeting held in Alexandria, May 17, this society was organized with the following officers: Dr. Robert M. Slaughter, Alexandria, president; Drs. George Tully Vaughan, U. S. P. H. and M.-H. Service, Washington, D. C., and Matthew W. O'Brien, Alexandria, vice-presidents; and Dr. A. Avery Rittenour, Alexandria, secretary and treasurer.

Society Proceedings

COMING MEETINGS.

American Medical Association, Portland, Ore., July 11-14, 1905.

American Laryn., Rhin. and Otol. Society, Boston, June 5-7.
American Orthopedic Association, Boston, June 6-8.
Indiana State Medical Association, West Baden, June 7-9.
Maine Medical Association, Portland, June 7-9.
Wisconsin State Medical Society, La Crosse, June 8.
Amer. Assn. of Genito-Urinary Surgeons, Montreal, June 13-14.
Massachusetts Medical Society, Boston, June 13-14.
American Pediatric Society, Lake George, N. Y., June 19-21.
Medical Society of New Jersey, West End, June 20-22.
Indian Territory Medical Association, Tulsa, June 20-22.
Michigan State Medical Society, Petoskey, June 28-30.
American Climatological Association, Detroit, Mich., June 29-30
American Surgical Association, San Francisco, Cal., July 5-7.
South Dakota State Medical Association. Deadwood. July 5-7.
Amer. Assn. of Life Ins. Exam. Surgeons, Portland, Ore., July 10.
American Medical Editors' Assn., Portland, Oreg., July 10.
Oklahoma State Medical Association, Guthrie, July 10-11.
American Urological Association, Portland, Ore., July 12-13.

ASSOCIATION OF AMERICAN PHYSICIANS.

Twentieth Annual Meeting, held at Washington, D. C., May 16-17, 1905.

(Concluded from page 1704.)

Some Phases of the Neurotic Heart.

Dr. Beverly Robinson, New York, divides these cases into four groups: 1, those accompanied by general evidences of *neurasthenia*; 2, cases of organic change in the heart; 3, cases of involvement of the stomach, bowels, or other organs, the heart condition being secondary; 4, cases in which various concomitant troubles are as much the effect as the cause of the cardiac lesion. Cardiac *dilatation and hypertrophy* may be of neurotic origin and murmurs may be produced in such condition. Organic lesion must be carefully excluded before this diagnosis is made. Treatment is apt to be uncertain and yield only temporary results. In cases of predominant neurosal element, the Nauheim treatment is often beneficial. Robinson emphasized the following points: 1, slight enlargement of the heart may be due to nervous disorders of that organ; 2, there develops a secondary *anemia* which remains stationary despite treatment directed toward *its* cure; 3, the absolute or relative uselessness of digitalis in this condition is an important point; 4, the heart muscle, which at times becomes involved to such an extent as to permit of slight dilatation, may be improved in nutrition in some cases until functional recovery is attained.

SECOND SESSION.

Case of Pneumococcus Sepsis.

DR. J. S. THACHER, New York, cited a case notable for the intensity and rapidity of onset of endocarditis and meningitis. The patient was ill only 19 days. He passed through a rather typical course of croupous pneumonia, the lung being almost entirely clear on the twelfth day. On the fourteenth day signs of fluid in the right chest developed and three days later, two days before death, the first evidence of cardiac trouble became manifest, a diastolic murmur appearing at the apex. The temperature was then 100 degrees. Multiple murmurs afterward developed. On the day preceding death the neck stiffened, headache was severe, and Kernig's sign was present. Lumbar puncture showed a turbid fluid from which a pure culture of the pneumococcus was made; similar cultures were obtained from the pus in the pleura and from the blood.

Six Cases of Perforation in Typhoid Fever in Children.

DR. J. P. CROZER GRIFFITH, Philadelphia, reported these cases because (1) the occurrence of typhoid fever and perforation in childhood is unusual; (2) the symptoms of perforation in children offer difficulties in diagnosis even greater than in the case of adults. In children there is less apt to be collapse, severe abdominal pain, uncontrollable vomiting, abdominal tenderness and abdominal distention.

DR. A. JACOBI, New York, said the difficulty in diagnosing perforation in children was rendered greater by the fact that now and then perforation occurs without diarrhea having been present at any time during the course of the disease. Diagnosis of perforation is not easy in any case and in some is impossible.

Hematemesis from Gastric Ulcer.

DR. W. G. THOMPSON, New York, gave data based on the study of 200 cases. One in 4.8 cases died, but this may not be accurate, as patients who leave the hospital as cured or improved may later die of hemorrhage, though not traced. Regarding operation for this symptom, Thompson believes it should be resorted to oftener than it is. Three indications call for operative intervention: 1, dangerous hemorrhage; 2, recurring hemorrhage not yielding to medical treatment; 3, adhesions to neighboring viscera, whether from the bleeding or other ulcer. The difficulties of accurate diagnosis are proved by the findings of operation and by examination of the stomach contents. Of 20 cases operated on 5 were found to have conditions entirely different from gastric ulcer; several personal cases had hematemesis but no ulcer. The analysis of the gastric contents is essentially no aid in diagnosis; a single examination is absolutely worthless and repeated passage of the tube is dangerous. In several cases unexpected lesions have been found at operation, another indication for early operation, even for diagnosis in some cases. As to the etiology of gastric ulcer, an interesting point is the much greater age of males in which it occurs: few males below 35 have ulcers, while the larger number of affected females are between 20 and 30. Whether of great significance or not, a large proportion of males suffering from gastric ulcer (one-fourth) were workers with metals.

DISCUSSION.

DR. F. P. KINNICUTT, Boston, said that in advising operative procedure one must bear in mind how frequently it is difficult to locate the lesions in the stomach, even at autopsy. They may be small and found only after the most diligent search; with the ordinary surgical incision they may easily be overlooked. A second point is the frequency of cases in which death from hemorrhage appears imminent, but in which the bleeding finally ceases and the patient lives many years.

DR. S. SOLIS COHEN, Philadelphia, said that relative to the recurrence of gastric ulcer we have as yet no positive data of cases in which operation has been performed to show how often new ulcers occur thereafter. He cited the case of an old man who, without symptoms referable to ulcer, suddenly had profuse gastric hemorrhage. Surgeons called in consultation considered him too weak for operation. When strength was regained there appeared to be no need for operation. Hemorrhage again occurred and the man died. Autopsy showed 40 or more small ulcers, 20 or 30 of which were healed. These multiple ulcers had been forming for years without causing symptoms. A second instance was that of a young lady, who, 17 years ago had severe gastric hemorrhage and recovered. She now has symptoms of ulcer but no hemorrhage, and refuses operation. There is still a great deal to be said on both sides of the question of operating for ulcer. In one case with gall-bladder symptoms operation revealed an ulcer of the stomach just on the point of perforation. The pain which led to operation appeared to be due to adhesions between the gall bladder and an old gastric ulcer.

Dr. B. W. Sippy, Chicago, mentioned the case of a girl who had repeated hemorrhages, the hemoglobin being 20 per cent. Surgeons hesitated, and she finally recovered without operation. The danger of operation in such cases is probably not so great as in anemias of slow development, but nearly all operated cases die. It is difficult to say if operation is justified.

Dr. J. H. Musser, Philadelphia, said it is important to remember cirrhosis of the liver as a cause of hematemesis. In cases simulating ulcer, but in which perigastric or periduodenal adhesions to the gall bladder are a possibility, a previous history of typhoid is an important aid in diagnosis, particularly typhoid of long duration and imperfect convalescence.

The Relations of Certain Stomach Disorders to Diabetes Mellitus.

DR. JOHN S. SAWYER, Cleveland, has for the past five years been treating cases of diabetes mellitus from the standpoint of the stomach rather than the glycemia; his results are quite satisfactory. Of the 19 patients treated, 17 gave a history of previous dyspepsia and had a definite catarrhal condition of the stomach. Lavage of the stomach with solutions of resorcin or with chloroform water gave almost immediate relief from excessive thirst, hunger, and polyuria. In several, cessation of glycosuria also followed improvement in the stomach condition. In a few cases similar results were obtained without lavage, but that expedient was most successful, especially in cases of motor insufficiency and hyperchlorhydria. The known duration of glycosuria was from six weeks to five years. The cases reported show that hunger, thirst, and polyuria are not so dependent on hyperglycemia as is commonly supposed, and that stomach disorders possess a far greater importance than is usually attributed to them. Lavage can be properly carried out only when the patient is in the reclining posture, and means other than gravity are used to cause return of the fluid; constant manipulation of the gastric region should be kept up while the fluid is in the stomach to secure thorough application to the organ and removal of the contents.

DR. JAMES TYSON, Philadelphia, has not noticed in diabetes particular symptoms referable to the stomach. It is possible, however, that the efficiency of Fowler's solution in diabetes may be due to its effect on the stomach functions. It is also possible that the formation of acetone and diacetic acid is due to gastric catarrh.

DR. S. SOLIS-COHEN, Philadelphia, has noticed in a number of cases of chronic glycosuria an increase of excretion of sugar accompany septic condition of the intestines, the increase disappearing when the intestines are made antiseptic.

Clinical Notes on the Use of Nux Vomica, Especially in Certain Forms of Hyperchlorhydria.

DR. J. H. MUSSER, Philadelphia, finds that cases of hyperchlorhydria, especially those secondary to gastric neurasthenia, which do not yield to ordinary treatment often do remarkably well on nux vomica. It must be given in ascending doses and in large quantities. In most cases 60 or more drops three times daily are used, but each individual regulates the point of tolerance. It must be given for long periods of time, usually four or five months. In young subjects the drug can be given in much larger doses than in older patients. Nux vomica and not strychnin must be employed.

Umbilical Hernia as a Little Recognized Source of Abdominal Pain.

Dr. D. D. Stewart, Philadelphia, called attention to hernia in the linea alba above the umbilicus as a cause of recurring abdominal pain and various dyspeptic symptoms, the cause of which is otherwise regarded as obscure. The hernia is commonly not much larger than a split pea, but may be the size of half a walnut.

Stone in the Kidney and Certain Conditions Simulating It.

Dr. D. D. Stewart, Philadelphia, described several cases, some of renal calculus with unusual symptoms or quiescent as regards the kidneys, others of a different condition but simulating calculus. In some of the former the diagnosis was obscure until repeated examinations of the urine revealed small quantities of blood. At least 4 of the cases of calculus might have been diagnosed intestinal involvement, so clearly did the symptoms point to that source. In one case severe gastralgia and enteralgia were the only symptoms; another had been treated for dyspepsia; 2 more were supposed cases of bowel trouble. One case diagnosed stone was found to be stricture of the ureter.

DISCUSSION.

Dr. I. N. Danforth, Chicago, exhibited 3 specimens from a girl of 25. All were calculi, one from the bladder weighing 180 gm. (6 ounces), another from the left kidney, and a third from the right kidney. The two first were removed during life, the last postmortem. No acute pain was ever felt in either kidney.

Dr. James Tyson, Philadelphia, has seen cases simulating stone in the kidney, some of them operated on and no stone found. In the last two operations done for him in which no stone was found, a condition which might explain the symptoms was what might be called capsulitis. The capsule was thickened, closely adherent and depressed. Decapsulation resulted in recovery in both instances. The symptoms had been those of tenderness over the kidneys and remittent or intermittent catarrhal urine. He advises examination for this condition when operation is performed.

Dr. T. Forschheimer, Cincinnati, has seen 3 cases of the type described by Dr. Tyson. Urinary analysis gave no evidence of a calculus, but the symptoms pointed to that condition. There was no inflammation of the perirenal fat, only of the capsule. All 3 patients recovered.

Dr. Frank Billings, Chicago, speaking of the significance of microscopic blood in the urine, said it was present in almost all cases of acute appendicitis; hence with a pain in the right side of the belly the blood might mean appendicitis or renal calculus. In the diagnosis of stone in the kidney, the Röntgen-ray is a disappointment nearly as frequently as it is an aid. This is especially true if the operator is not a physician.

Study of Abdominal Tumors.

Dr. R. C. Cabot, Boston, presented a statistical study of 4,786 tumors collected from the records of the Massachusetts General Hospital. The 5 highest in point of frequency were tumors of the liver, uterus, ovary, kidney, and hernia. Among the points of general interest is the slow growth of cancer of the intestine and the condition found in tuberculous peritonitis. In only 2 of 33 cases of the latter condition was the omentum rolled up to produce a tumor; in the others the swelling was due to matted intestines. Another point was that the lower part of the abdomen was involved as frequently as was the upper. Fever was not an infrequent symptom of cancer of the liver.

DISCUSSION.

Dr. M. H. Fussell, Philadelphia, emphasized the point regarding chronicity of carcinoma of the intestine; one case lasted for 12 or 14 months.

Dr. W. S. Thayer, Baltimore, spoke of the frequency of fever in cancer of the liver. He mentioned 2 cases of rapidly growing sarcoma of the liver accompanied by fever; in one the diagnosis of typhoid had been made; the other resembled typhoid in all respects except the leucocyte count. Another case, occurring in a nurse, had fever, chills, prostration, anemia and slight jaundice. The liver was smooth and a diagnosis of abscess was made. Autopsy showed an adenocarcinoma.

Dr. F. P. Kinnicutt, Boston, said his experience confirmed the infrequency of rolled-up omentum in tuberculous peritonitis.

Dr. J. H. Musser, Philadelphia, said chronicity is a feature of cancer of the large bowel. In one of his cases a tumor above the sigmoid lasted for more than 18 months. Localization of the lesion is one reason for this comparative benignity.

New Method of Treating Cardiospasm.

Dr. B. W. Sippy, Chicago, demonstrated a method of overcoming cardiospasm which has given excellent results in a patient who for months had to be fed through a tube. The apparatus is a cloth-covered balloon containing a central canal through which is introduced an ordinary esophageal bougie. After the bag is in position it is dilated and the cloth holds it at the place desired.

THIRD SESSION.

Considerations on Proteid Diet, with Especial Reference to the Distribution of Amido-Nitrogen, Diamino-Nitrogen and Monamino-Nitrogen.

Drs. L. F. Barker and B. A. Cohoe, Chicago, spoke of the well-known variations in tolerance of the same individual for different kinds of proteid food, and the consequent desirability of seeking a cause in the chemical constitution of the foods. The distribution of the various forms of nitrogen in articles of proteid diet has not hitherto been investigated; this the writers have done, applying the method of Hausmann as modified by Osborne and Harris, and by Gumbel. The amido-nitrogen, melanoidin-nitrogen, diamino-nitrogen, and monamino-nitrogen have been determined in various cuts of beef, veal and pork, in liver, thymus, in fish and in chicken. Elaborate tables set forth the results of the studies and were explained at length. The proteid molecule is exceedingly complex but the ultimate elements are surprisingly few. From all the work that has been done on the subject, Barker believes the possibility of making synthetically all the albumins is a reasonable supposition. This would give the key to the knowledge of proteid foods. Chemical methods of investigation are an aid, but Barker disclaims any illusion that this is to solve all problems; many conditions and processes may, however, be explained in this manner. For instance, amyloid formation is probably due to the substitution of one form of nitrogen for another. Again in gout, monamino-acids appear in the urine and it may be shown that this form of metabolism is as important in this disease as uric acid metabolism has been supposed to be. In phosphorus poisoning similar metabolic changes are at work, as indicated by experiments.

The Chlorid Exchanges in Three Cases of Chronic Nephritis, with Reference to the Dechloridation Treatment.

Drs. A. O. J. Kelly and C. A. Fife, Philadelphia, reported 3 cases treated by the dechloridation method, with very marked improvement in one, moderate improvement in a second, and absolutely no effect in a third. The first has anasarca and under a salt-free diet his weight fell from 203 to 139 pounds; later this went to 160 but without the appearance of edema. The third patient was in a desperate condition and Edebohl's operation was performed, but gave no relief. Kelly considers the sodium chlorid content of the urine as of some value in prognosis in cases of nephritis; an increase following a low percentage is a good sign, a decrease is bad. Concerning the mechanism of retained sodium chlorid in the body, Kelly believes the salt is first deposited in the tissues, water is then retained with increase of weight but at first without edema, and finally edema appears. In this connection the changes in circulation have not been sufficiently investigated. A salt-free diet may be of benefit in some cases of nephritis and should be tried; it may be given continuously for some time or at intervals during the course of otherwise intractable cases. A point that demands investigation is whether harm is done by the injection of saline solution, as in cases of toxemia and even in nephritis.

Chlorid Retention in Nephritis.

Dr. Jos. L. Miller, Chicago, presented statistics regarding chlorid retention in 2 cases of acute and 6 of chronic parenchymatous nephritis, one of secondary contracted kidney, one of myocarditis, and 4 normal individuals. Of the 6 kidney cases with edema, all had chlorid retention. Miller considers the retention in nephritis as one of degree only, as retention may be equally great in normal persons; the latter gain in weight, but without the appearance of edema. Retention in moderately severe nephritis is not greater than in the normal individual; in severe cases the impermeability of the kidney to sodium chlorid is greatly increased. Edema is probably partly due to lessened perspiration following increased concentration of the body fluids.

DISCUSSION.

Dr. Alfred Stengel, Philadelphia, who had charge of 2 of the cases reported by Dr. Kelly, said the improvement in the one case was remarkable. The second gain in weight was evidently due to his improved general health and not fluid accumulation. In the second case an interesting point was that the patient had for some time been given enteroclysis with salt solution and had become worse. Since the work of Dr. Kelly was carried out, Dr. Stengel has been in charge of a man of 36 who had acute nephritis 8 years ago and several attacks since, in whom reduction of sodium chlorid has given good results. The man is a private patient and routine investigation, as in the others, cannot be employed. He has arteriosclerosis with the highest blood pressure Dr. Stengel has ever noted, the systolic reaching 280 mm. of mercury. Headache has been a prominent symptom during his entire trouble. The patient volunteered the information that he has always been an inordinate salt eater. Reduction of salt in his diet has been followed by a remarkable improvement as to the headaches and the blood pressure. Regarding the general value of chlorid retention and excretion, Dr. Stengel says it promises something in the line of a method of determining what the kidneys are doing in individual cases, and hence a help in prognosis. Other methods have proved inadequate for this purpose, albumin being discredited as a guide, and cryoscopy probably being of little value and the method so cumbersome as to be practically unavailable even if it were of value. Hence, chlorid retention constitutes a hopeful line of research, but is not so important as the French consider it.

Dr. F. P. Kinnicutt, Boston, said he is giving up the indiscriminate use of salt solution by hypodermoclysis and enteroclysis, and is satisfied that better results are thus obtained.

Dr. D. L. Edsall, Philadelphia, considers sodium chlorid retention possessed of only a limited diagnostic value.

Dr. S. J. Meltzer, New York, said the investigations along this line were too loosely carried out as the excretion of sodium chlorid by the intestine and skin was not accurately determined. The only safe point to consider in this question is that sodium chlorid controls osmosis. It is possible that in diabetes there is high osmotic pressure with the abstraction of fluid. The results with diabetics detailed by Dr. Sawyer may have been due to removing chlorids by washing the stomach and thus eliminating the abnormal factor in osmosis; this would appear to account for the lowering of polyuria without reducing the sugar output. Possibly a beneficial effect would be produced by a salt-free diet in diabetes.

Dr. R. C. Cabot, Boston, asked if any knowledge we possess indicates that we should discountenance the eating of large amounts of salt by well persons.

Dr. A. Jacobi, New York, asked if any one had experience with salt-free food in the treatment of epilepsy.

Dr. Joseph Collins, New York, said that 2 years ago 25 hospital epileptics were put on reduced salt diet with the result of a reduction of 38 per cent. in the frequency and severity of the epileptic attacks. Recently the same method was adopted with 5 dispensary patients: in 4 of them the attacks have been reduced upwards of 50 per cent. A normal individual may eat as much salt as he pleases, just as he may eat anything else or do anything, up to a certain limit. When he is not normal, whether due to disease or what is called old age, he may not eat salt with impunity.

The Toxicity of Bile.

Drs. S. J. Meltzer and **W. Salant**, New York, reported the results obtained in experimenting with the various toxic aspects of bile on animals, principally frogs. They found that bile contains 2 elements: first, a depressing or coma-producing substance and, second, an exciting or tetanizing substance. These are antagonistic to each other, and normally the second is covered by the first, resulting in neutralization.

The Nature and Origin of Cholemia and Uremia.

Dr. S. J. Meltzer, New York, reviewed the various theories regarding the nature of these conditions. None of the theories explain why the substances they suppose to be present are in the blood for years and produce no attack until a certain time; neither do they show why at times coma, at times convulsions, are produced. Based largely on the results obtained by the experiments detailed in the preceding paper, Meltzer advances a theory to explain cholemia and uremia. When the exciting and depressing substances are in equilibrium, the functions are normal; when they are unstable and there is retention by the kidney or liver, a slight additional accident is sufficient to bring out either the effect of the coma-producing substance or that of the exciting or tetanizing agent.

Dr. James Ewing, New York, said that if the liver has to do with uremia, these statements support the claim that in uremia the liver is often more affected than is the kidney. He has been studying the livers from a series of cases of uremia and in certain instances has found striking lesions therein, more pronounced than in the kidneys.

Dr. S. Solis Cohen, Philadelphia, asked if Dr. Meltzer excluded cases of chronic uremia from the list caused in the manner he suggests. These cases appear to be admirably explained by that theory, the explosive attacks during the course of the disease being due to the failure of the kidneys to eliminate one of the involved substances.

Dr. James Carroll, Washington, called attention to the lesions found in the liver in cases of yellow fever, fatty degeneration mainly. If the liver elaborates urea, this function will cease when it is seriously affected, and the products formerly used will be retained. In so-called cases of puerperal eclampsia in which the kidney, as indicated by the urine, is not at fault, excessive fatty or cirrhotic changes have been found in the liver.

Xanthelasma and Chronic Icterus.

Dr. T. B. Futcher, Baltimore, reported 3 cases of multiple xanthomas in patients with chronic icterus. All 3 were women, the ages ranging from 39 to 42 years. In two, the jaundice was caused by gallstones; in the other, by hypertrophic cirrhosis. In one of the first group, the xanthomas disappeared after operation. The relation between jaundice and xanthomas is shown by the fact that four-fifths of cases of the latter occur in cases of jaundice or in liver affections without jaundice.

Case of Lymphatic Leukemia in a Child of Three Years.

Drs. John Lovett Morse and **Harry C. Low**, Boston, cited this case, the duration of which was 5 months. The blood picture, while suggesting leukemia, was not characteristic of that condition during the first 4 months. At the end of 3 months, a lymphnode was removed but histologic examination did not justify the diagnosis of leukemia, the appearance being more suggestive of sarcoma. At the end of 4½ months, a node exhibited typical hyperplastic changes, and the blood during the last month was that of lymphatic leukemia. The atypic blood and lymphnode pictures during the early months are the most important features of the case.

DISCUSSION.

Dr. T. Forschheimer, Cincinnati, mentioned a case of leukemia occurring in a child of 8 months, death ensuing in 10 weeks. The age of the child, the rapidity of the course, and the marked lymphemia were the prominent features. The leucocyte count reached 151,000, with 99.6 per cent. of small lymphocytes.

spoke of the relief following the removal of changed tissues. He cited illustrative cases and gave the results.

Cerebral Infection from Middle Ear Disease.

Dr. **Norval H. Pierce**, Chicago, referred to the anatomic paths by which suppurations within the temporal bone reach the contents of the calvarium. He discussed the character of the primary inflammations which produce intracranial complications, as well as the influence of locality of the primary inflammation on the different intracranial complications. Purulent inflammations of the dura and extradural abscess were discussed. He referred to meningitis and meingoencephalitis serosa following suppurations within the temporal bone; also to phlebitis and thrombosis of the dural sinuses and of the jugular vein. Reference was made to isolated thrombosis of the jugular bulb and to otitis brain abscess.

Prophylaxis of Syphilis.

Dr. **Alfred Schalek**, Chicago, said there is renewed activity in this direction among physicians. The reasons are not an increase in the number of cases, nor a more severe course of the disease, but better statistics and the present improved prophylactic measures against other infective diseases. The spread of syphilis can be limited by means which apply to the general public and to the individual. The former includes control of prostitution, but has proved a failure. Impracticable also is the suggested compulsory report of cases by physicians. A better measure is the education of the public as to the nature of the disease. Instructions should be given how to avoid infection innocently. He makes a plea for increased facilities for treatment in hospitals and dispensaries. The author thinks that at the present time the most valuable prophylaxis against syphilis ought to be practiced by the medical profession in their relations with their patients. Since no methods are known to abort the disease after infection occurs, the most important duty is thorough treatment.

Some Cases Demanding Removal of the Eye.

Dr. **J. Brown Loring**, Chicago, discussed the responsibility resting on the physician and surgeon, as well as the ophthalmologist, with regard to the treatment of blind eyes. Reports were given of three cases of sarcoma, one of glioma, and five of iridocyclitis of various origin, causing or threatening sympathetic ophthalmia. The first four cases indicated danger to life, the others danger to sight. Statistics were given as to the frequency of sympathetic ophthalmia. Attention was called to the unsatisfactory and at times contradictory manner in which the subject of treating eyes blind from iridocyclitis is discussed in modern text-books. A plea was made for a more radical treatment of these cases from every standpoint.

Immediate Diagnosis and Treatment of Lacerations of the Vagina and Pelvic Floor and Perineum.

Dr. **C. S. Bacon**, Chicago, classified tears as external and internal. In both there are many grades, and either may be simple or combined with those of the other class. Diagnosis concerns both the finding of these lacerations and determining their extent and importance. Both touch and inspection are employed. The pain caused can be disregarded, but the risk of infection is considerable and should be carefully considered. Hirst's proposed delay of all examination and operation till the end of a week is not practicable, and the author favors immediate examination and repair, but only with as careful asepsis as would be employed in a secondary operation. In a non-operative labor, when there is no hemorrhage with the expulsion of the head, and no severe external tear, there will be no internal laceration, and an internal examination is unnecessary.

Hemorrhage is rarely an indication for operation in vaginal and perineal tears. The bad results of unimpaired lacerations are generally the reasons for operation. Spontaneous repair is a delusion. Proper preparation is very important in all repair operations. Especial attention should be given to vaginal lacerations which involve the pelvic diaphragm and extend into the central detachments of the accessory diaphragm, but do not implicate the skin surface. Here the skin bridge may be cut and the repair made as in a combined vaginal and perineal laceration, or the internal suture can be applied so as to bring in apposition the divided structures. The perineal sutures of silkworm gut must not be tied too tightly. In a complete rupture the method of restoring the rectal tube by passing the suture through the rectal mucous membrane is preferred to the passing of the suture from the perineal side. The author prefers cutting the ends of the perineal sutures short. He discards powder. Catheterization is unnecessary. A wide occlusive dressing, fastened by the four corners to the abdominal bandage, is much better than the ordinary dressing held by the T bandage. Chief stress is laid on attention to details in the preparation for and technic of operation, without which poor results and total failures furnish grounds for discarding immediate operations.

Pelvic Infections in Women.

Dr. **T. J. Watkins**, Chicago, said that pelvic infection was preferable to pelvic inflammation as a name to designate disease, as infection injures and destroys tissue, whereas inflammation tends to conserve tissue. He alluded to the importance of the disease and said that the same principles are involved in pelvic infections as in infections in other parts of the body. He considered the etiology, pathology, symptomatology, diagnosis, prognosis and treatment. The importance of prophylaxis was pointed out. Topical applications are often of little or no value. Conservatism during the acute stage is of great importance. Spontaneous and complete recoveries sometimes ensue.

Dr. **Fernand Henrotin**, Chicago, made some remarks concerning when and how to treat septic pelvic affections of women by vaginal incision and drainage.

Dr. **George Schmauch**, Chicago, discussed the diagnosis and treatment of rupture of the uterus.

Dr. **L. H. Nickerson**, Quincy, discussed the diagnosis and treatment of laceration of the vaginal portion of the uterus and fornix vaginæ.

Intussusception in Infancy and Childhood.

Dr. **J. H. Hess**, Chicago, stated that (1) intussusception demands an early diagnosis and immediate treatment. (2) Abstinence from all food, and, far more important, purgation must absolutely be prohibited. The question of sedatives in the form of opium, etc., must rest with the physician. (Irrigation may be tried *once or twice* under the proper conditions and in properly selected cases. Preparation for immediate laparotomy should be made in the case of failure. Hot salt solution or plain water may be used under a pressure of not more than three feet, the fluid being allowed to remain in the bowel for not less than ten minutes. He pointed out the contraindications to irrigation as follows: (1) Recurrence after a previous complete or partial reduction. (2) The very acute and severe types of this disease, which result in early destruction of the bowel wall, but which cases are fortunately not the most frequent type. (3) Where there are signs of beginning gangrene or ulceration evidenced by subnormal temperature, profound toxemia and other septic symptoms. (4) Enteric intussusceptions. (5) Laparotomy should follow failure of irrigation without delay. One should attempt simple reduction from below upward. In irreducible cases, resection within the bowel in selected cases, or, where this is not feasible, resection with end-to-end anastomosis should be attempted where the patient's condition makes it practicable. An artificial anus or simple packing about the bowel requires a secondary and only too frequently a fatal operation.

Bronchoscopy for the Removal of Foreign Bodies from the Lungs.

Dr. **E. Fletcher Ingals**, Chicago, mentioned previously reported cases, discussed the removal of foreign bodies by the upper and lower routes and described the instruments used in removing these bodies.

Other Papers Read.

Dr. **George E. Shambaugh**, Chicago, discussed the indications for opening the mastoid process in cases of acute empyema of the cells where there is an absence of signs over the external surface of the mastoid.

Dr. James W. Twitchell, Belleville, reported a case in which recovery occurred following a perforated wound of the intestine without surgical interference.

The following papers were also read:

"The Value and Place of Duodeno-Choledochotomy in Gallstone Surgery," by Dr. John C. Hancock, Dubuque, Iowa; "Inversion of the Uterus, with Report of Cases," by Dr. P. L. Markley, Rockford; "Pathology and Diagnosis of the Lesions of the Spinal Cord and Peripheral Nerves," by Dr. F. P. Norbury, Jacksonville; "Malignancy in Uterine Myomata," by Dr. Henry F. Lewis, Chicago; "Air Examinations, Importance and Results," by Dr. Adolph Gehrman, Chicago; "Typhoid Fever," by Dr. G. G. Craig, Rock Island; "Cases of Erysipelas Treated with Marsh Purslane," by Dr. H. C. Mitchell, Carbondale; "Respiratory Oxidation Stimulants in Nephritis, Pulmonary Dyspneic and Allied Crises," by Dr. Geo. F. Butler, Chicago; "Syphilitic Meningitis in Children," by Dr. Wm. J. Butler, Chicago; "Pneumonia in Children," by Dr. J. C. Cook, Chicago; "Case of Poisoning from Oil of Wintergreen," by Dr. F. C. Vandervort, Bloomington: "Stricture of Esophagus Following Typhoid Fever, Colloid Carcinoma of Cecum, Penetrating Wound of Liver and Gastroenteroptosis," by Dr. S. C. Plummer, Chicago; "The Commerce of Surgery," by Dr. Fernand Henrotin, Chicago.

The last mentioned paper will be published in full in The Journal.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Regular Meeting, April 12, 1905.

The President, Dr. James M. Anders, in the Chair.

Resection of Elbow.

Dr. G. G. Davis exhibited a girl of thirteen, who, at the age of seven, sustained an injury of the elbow resulting in stiffness. Two years ago there was pain and discharge. On account of the excessive pain, the ulnar nerve was freed, but the pain continued. A skiagraph showed ankylosis of the bones of the forearm with those of the arm. He made a resection, and the result is ability to do light housework and the use of the arm in sewing. The apparatus used to secure motion was an attachment to the forearm with a light weight allowed to hang at the back.

DISCUSSION.

Dr. Henry E. Wetherill thought the light weight employed by Dr. Davis an improvement over the heavy one of a flat iron sometimes used to maintain motion. He showed a small device cut from wood, on the plan of the stethoscope, for measuring the amplification of sound of the aortic and other valves. The instrument is flute-like in appearance, is placed in the ear, and the fingers one after another taken off of the holes until the sound is not heard. The roaring, a troublesome feature of the ordinary stethoscope, is avoided by the use of a pinhole. The instrument has proved of practical value.

Encysted Calculus Removed by Suprapubic Cystotomy. Enlarged Prostate.

Dr. Edmund W. Holmes reported a case of encysted calculus removed by suprapubic cystotomy from a patient, aged 45, presenting the classical symptoms of stone in the urinary bladder. Under ethyl chlorid anesthesia the bladder was washed out with a Bigelow evacuator and a careful systematic search made with a sound. The shadowgraph showed the presence of a small calculus. Suprapubic section revealed the calculus encysted in the lower, posterior wall of the bladder. Its complete encapsulation had caused failure of detection by the sound.

Dr Holmes also reported a case of enlarged prostate removed by perineal prostatectomy in a man aged 72. The first attack of retention of urine had occurred five years ago requiring catheterization for about two weeks. In August, 1904, there was a second attack during which catheterization became difficult and painful. Dr. Holmes saw the case in consultation, and subsequently did a perineal prostatectomy. Later, the patient refused catheterization; the fistula remains in the perineum (8 months after operation). The man has complete control over urination, the urine passing out altogether through the opening in the perineum. The man is in good health.

Posterior Gastrojejunostomy for Benign Stenosis of the Stomach.

Dr. William H. Morrison presented the following case: The patient, male, aged 44 years, came under observation in August, 1904, with evidences of almost complete stenosis of the pylorus and great dilitation of the stomach. During the previous four years there had been three attacks of gastric hemorrhage. He vomited almost daily, and in the vomitus were frequently found articles that had been eaten one or two days previously. There was great weakness and emaciation. No tumor could be detected. A posterior gastrojejunostomy, with the Murphy button, was done on Nov. 4, 1904. Recovery from operation was rapid and complete. All symptoms of digestive disorder disappeared, and the patient was able to eat and digest all varieties of food. Strength and flesh were rapidly regained and in four months the weight increased forty pounds. The button was not found.

Dr. William L. Rodman regarded the case a proper one for gastrojejunostomy, and agreed with Dr. Holmes that the Murphy button still has its place in gastric surgery. The operation of anterior gastrojejunostomy, he believes, is passing out of use.

Epidemic Cerebrospinal Meningitis.

Dr. James C. Wilson read this paper, which was published in The Journal, April 29, 1905, p. 1334.

DISCUSSION.

Dr. James Tyson said that there is a tradition that the epidemic which occurred during the war of the Rebellion was introduced by returning soldiers, and that there was also a popular belief that the cause of the disease lay in molded hay. Since that time, cerebrospinal fever has never entirely disappeared from Philadelphia. The most important question of the subject is that of its contagiousness. While Dr. Wilson had deduced remarkable cases, apparently dependent one on another, he recalled a paper by Dr. A. C. Abbott before the Philosophical Society citing cases occurring one after another in the most remote districts. Dr. Tyson believes that the disease is to a certain extent contagious, but not virulently so, as compared with typhoid fever. He is favorably inclined toward the submersion treatment of the paralytic phenomena. In a case of almost total paralysis, this treatment, in conjunction with massage, has brought about almost entire recovery. The principle of the treatment is to place the patient in a bath of warm water and to encourage voluntary motion, which is accomplished with greater facility than in the open air.

Dr. A. C. Abbott said that there appears to be a pneumococcus meningitidis, which is differentiated only by the modern method of lumbar puncture, or is found at autopsy. The opinion is becoming prevalent that, as in the case of pneumonia, there are individuals going about harboring the organism which the profession regards as the most productive factor of meningitis. It would look as if the widespread appearance of the disease, as it is understood, often may be due to auto-infections that are induced by some undetermined etiologic factor concerned with a corresponding outbreak of pneumonia. What that factor is, has not yet been determined.

The opinion is general that if the disease is transmissible at all, it is mildly so, and the experience of the Department of Health in Philadelphia has not been different from that of others. Up to the present time there have been reported at the Health Department, since September, 58 cases of cerebrospinal fever, with 18 deaths, a mortality of 31 per cent., and this is not allowing for erroneous diagnoses or doubtful cases. Of 34 histories, 6 cases were very doubtful; 5 were almost certainly tubercular. Two of these were shown to be tubercular by lumbar puncture, and 2 cases by lumbar puncture at the autopsy were found to be due to pneumococcus, so that out of the 34 there were 13 which might be taken out of the original 58. From records of outbreaks it appears that the disease is very mildly contagious.

Dr. Longcope gave a review of the bacteriologic work in acute meningitis in the Pennsylvania Hospital in the past two years. Eighteen spinal fluids of such cases have been studied. In 4, the pneumococcus was found, and in 12 the meningococcus. There were excluded 8 cases in which the tubercle bacillus was found. In 1 case, the organism was found on the third and fourth days of the disease. In 385 autopsies, there were 24 cases of acute meningitis and 15 of tubercular meningitis. Six of these were due to either the streptococcus or staphylococcus, and were secondary to scalp wounds, otitis media, or to fractures of the skull. He referred to the conjunctiva as being an additional source from which the organism may be distributed. In one of the cases at the Pennsylvania Hospital there was severe purulent conjunctivitis in which the meningococcus was isolated. The case came to autopsy and the lesions were typical of acute meningitis and the organism was found again in the exudate.

Dr. Frank Woodbury believes that treatment should not be directed too markedly to the lesion in the nerve centers, brain and spinal cord, because the disease is primarily a blood infection. He advocates the administration of such antiseptics as would be destructive to the meningococcus in the blood, and wherever the blood would carry it into the brain and spinal cord. Such antiseptics are creosote, guiacol, betanaphthol and other coal-tar derivatives. It seems to him possible that these cases may be favorably influenced by injections of formaldehyd into the blood.

Dr. Norman B. Gwyn referred to his observation of an epidemic of cerebrospinal fever in 1899. Eleven cases were attended in the hospital and seen frequently by doctors, nurses and students, yet there was no development of the infection among the attendants. On the other hand, one of the cases gave a distinct history of having been 24 hours before in the barracks from which several cases of meningitis had been reported. Among the interesting observations of these cases was the development of chronic cases in which there was fever, typhoidal in type, with the temperature running to 105-6. which might persist for five to seven weeks. There were cases with acute symptoms, such as convulsions. In each case lumbar puncture was not only of value as a diagnostic measure, but of very material value in relieving the distress of the patients. Convulsive seizures could be allayed as the fluid was drawn from the cord. In the bacteriologic study, the *Diplococcus intracellularis meningitidis* was obtained without difficulty in every acute case. As the case developed into the chronic stage, it became more and more difficult to find the organism in the fluid. Blood cultures, in one case, demonstrated the presence of the meningococcus. In this case there was severe arthritis, and the meningococcus was found in the joint fluid. In many cases the severe symptoms of meningeal irritation, such as rigidity, were frequently relieved by immersion in hot water. In one case, surgery was resorted to. The needle brought away thick pus in which the staphylococci were readily demonstrated. The spinal cord was opened and freely drained and the case did remarkably well for some weeks, but died later from secondary infection of the fluid.

Dr. Gwyn believes that the suggestion of the disease being a blood infection should be given more consideration, and thinks it possibly due to this that surgical procedures have failed.

Dr. William Wadsworth spoke of the probable outbreak of meningitis following a similar infection in horses.

Dr. J. B. Crozer Griffith referred to his experience in the Children's Hospital. Each year brings to the hospital some cases of what may be called cerebrospinal fever. Though they have come in groups of two or three from a family, they are usually isolated, and all the types have been presented. There has never been a spread of the infection in the hospital, and the cases are not isolated. He emphasized the marvelous irregularity of the disease in type. He referred to one case outside the hospital which was absolutely typical. Another was fairly pneumonic, and in a third, it would have been said there was present an ordinary pneumonia, were it not for the observation of a little more rigidity and tendency to abdominal rash than is expected.

Dr. A. E. Roussel emphasized the fact that even in acute cases the *Diplococcus intracellularis* is not found on the first examination. In one case mentioned in the literature as many as three examinations were made before the organism was isolated. In subacute cases the organism is not found at all. In one case, lumbar puncture was performed twice, and was negative in both instances. The patient improved, but afterward passed into a chronic state. Death occurred outside of the hospital, and it was said that the postmortem was entirely corroborative of the diagnosis.

Dr. Boyer, of the Municipal Hospital, said that nine cases of cerebrospinal fever had been sent to the hospital since December, of which a full report would be made at some future time. In one case, on the fifteenth day, there was a leucocytosis of 49,000; on admission, the count was 17,600. One case showed a count of only 7,400. In 7 cases the diplococcus was secured from the spinal fluid and from the nasal mucous membrane. Kernig's sign was present in all the cases. Three gave positive Widal reaction. In none of these three was there any sign of enteric fever. All had retraction of the head and stiffness of the back. Babinsky's sign was met with frequently. The first symptom noted was anesthesia of the conjunctivæ, and generally of the corneæ. In several instances in which it was thought there were pressure symptoms, lumbar puncture did not show excess of fluid. This, he thought, was due to the fulminate type of the disease. In the nine cases in the Municipal Hospital not one vomited while in the hospital. In one case there was marked keratitis, and in one, ulcer of the cornea. The latter showed the meningococcus.

NATIONAL ASSOCIATION FOR THE STUDY AND PREVENTION OF TUBERCULOSIS.

First Annual Meeting, held at Washington, D. C., May 18-19, 1905.

(Concluded from page 1708.)

Resolutions on Governmental and Private Responsibility.

The following resolutions, already referred to, were offered by Dr. H. S. Anders and were adopted:

Whereas, The sanatorium is now recognized as constituting one of the most valuable agents in the treatment of tuberculosis; and

Whereas, In the face of the still enormous needs of the tuberculosis problem hardly more than a fair beginning has been made in its solution: be it

Resolved, That we emphasize publicly and primarily the duty of governments, especially state and municipal, in the more general founding and maintenance of such sanatoria and encourage the philanthropic opportunity of private individuals to the same end. Further, be it

Resolved, That we emphasize the educational, disciplinary and hygienic value of these sanatoria and special hospitals, not only to the segregated, instructed and aided patients themselves, but to the general practitioner and to those patients themselves, but to the general practitioner and to those patients for whom institutional treatment is not possible or feasible.

Early Diagnosis.

The report of the committee on early diagnosis, referred to below on page 1805, will be published in full in The Journal.

PATHOLOGIC AND BACTERIOLOGIC SECTION.

Channels of Infection in Tuberculosis.

Dr. William H. Welch, Baltimore, was introduced by Chairman M. P. Ravenel and delivered the introductory address. Although there are many conflicting statements and theories regarding tuberculosis questions, they do not materially influence measures of protection against the disease which must be carried out on broad lines in which there is more unanimity of opinion. Dr. Welch does not believe the statement of some writers that 98 per cent. of all persons of more than 20 years possess tuberculous lesions. That the small specks seen in organs and called by some tuberculosis are due to attenuated bacilli, as has been suggested, is a question for study. On the whole, it is not best so to regard them. Welch agrees with Cornet as to the fallacy of giving the frequency of tuberculosis in terms of those dead; it should rather be based on the living. If every person that died was subjected to postmortem, such high figures would not be obtained. Again, the conclusion that one person is resistant and another is susceptible, because the first escapes lesions and the second does not, is not justified; the virulence of bacilli in the two instances may be the reason. Welch does not wish to be understood, however, as not believing in predisposition to tuberculosis; he does, but does not like the term *ubiquitous* as applied to the bacillus. This indicates that it is widespread and aggressive as are the common pyogenic organisms, a view that can not be endorsed.

As to the origin of tuberculosis from bovine and from human sources, the transmissibility of human bacilli to cattle has been demonstrated beyond a doubt. In this connection two points are yet to be determined: (1) The frequency in human beings of tubercle bacilli virulent to cattle, and (2) what percentage of these organisms came originally from cattle. The transmissibility of bovine bacilli to human beings can not be demonstrated experimentally and must be judged from inferences. One method of doing this is careful clinical study, but conclusions therefrom are open to such fallacies that they rarely or never can be considered positive. Another method is to study the localization of the disease, principally as to whether there is primary intestinal tuberculosis. Here we are met with the fact that many of these intestinal lesions are not bovine in origin.

Regarding primary intestinal tuberculosis, there is the most remarkable variation in statistics. Welch can explain them in no other way than by supposing that the incidence is greater in some localities than in others; the irregularity remains a mystery. The whole determining point is the character of the bacilli found in the lesions. This will prove an exceedingly laborious task to perform and it will be a long time before there are sufficient data to settle the question. There is now enough evidence to indicate that the majority of cases are due to the human bacillus, but cases of undoubted bovine origin have been found and render infection from this source a by no means negligible factor. The view of Behring that infection occurs in early childhood and that nearly all cases are bovine in origin, can not be maintained. His assertion, however, is likely to lead to as important investigation as did the famous statement of Koch, and hence is of value. A sufficient number of cases of congenital tuberculosis have been demonstrated to show that this is not a pathologic curiosity; Schmorl's studies indicate that the entrance of tubercle bacilli into the fetus of a tuberculous mother is not uncommon, and the possibility of infection thereby is not to be disregarded by physicians. Regarding the relative frequency of respiratory and alimentary infection in tuberculosis, Welch says that though the latter is far more frequent than was formerly supposed, cases of respiratory infection are still the more numerous.

The Value of Serums in Protection, Diagnosis, Prognosis, and Treatment of Tuberculosis.

DR. A. J. RICHER, Montreal, obtained surprisingly good results from the use of Marmorek's antitubercular serum in 7 advanced and 9 incipient cases. The action appears to have been specific, as it did not fail in any instance. His method of employing the serum is to give 10 c.c. during the first three days, 2, 4, and 4 c.c. respectively, then rest ten or fifteen days. The three doses are then repeated, with the same resting period alternating, until 50 c.c. have been given. Finally, 5 c.c. are given monthly for four or five months.

DR. G FIGARI, Genoa, reported on the natural and artificial protection of man against tuberculosis. He obtained the most hopeful results from the use, by the mouth, of substances found in the blood, milk and flesh of animals in which the production of immunity has been attempted. By administering the serum of such animals, a certain degree of immunity in human beings may be attained. The results have been sufficiently encouraging to warrant the trial of this method of protection in the children of tuberculous parents and in others specially predisposed to the disease.

DRS. H. M. KINGHORN, Saranac Lake, and M. P. RAVENEL and H. R. M. LANDIS, Philadelphia, considered the serum diagnosis of tuberculosis. Lack of correspondence in certain features of the two reports appear due to differences in the cultures employed, the standardization of which is the greatest difficulty to overcome in this work. Kinghorn, in an experience with 62 cases, found reaction usually absent in far-advanced cases and most often present in favorable cases. His results do not lead him to rely on the method as a sure or reliable test of tuberculosis. Landis also concludes that the agglutination test is not available for diagnosis. A low agglutinating power is unfavorable in prognosis. His experiments indicate that the resisting powers of individuals are increased by sanatorium life.

DRS. BALDWIN, KINGHORN, ALLEN, and NICHOLS, Saranac Lake, dealt with the serum and tissues of immunized rabbits. The results were largely negative, one point being there is no marked difference in opsonic power of immunized and control animals.

Papers were also read on "The Blood in Tuberculosis," by J. Ullom and F. A. Craig; "Tuberculosis of the Thoracic Duct and Acute Miliary Tuberculosis," by W. T. Longcope; "Studies in Mixed Infection in Tuberculosis," by M. P. Ravenel and J. W. Irwin; "The Thyroid Gland in Tuberculosis," by W. B. Stanton, and "Landry's Paralysis Complicating Tuberculosis," by D. J. McCarthy, all of Philadelphia, and on "The Vitality of the Tubercle Bacillus in Sputum," by D. C. Twitchell, Saranac Lake.

CLINICAL AND CLIMATOLOGIC SECTION.

Clinical Nomenclature.

This subject was presented in the form of a report of a committee of six of which Vincent Y. Bowditch, Boston, is chairman. In general, the outline suggested by the committee follows that of Turban in order that statistics here may be compared with those of Germany, England and France in which that classification is used. Minor changes only have been made. The point in the report which brought out the most discussion is that relating to the term "cured," which is defined as the condition in which "all constitutional symptoms and expectoration with bacilli are absent for a period of two years under ordinary conditions of life." This time was considered too short by many speakers. Some objected to the word "cure" in this connection as tending to create in the minds of patients a false sense of security, and rendering more difficult the enforcement of proper methods of living after treatment. The report as presented was finally adopted, as was also a resolution asking that a copy be sent to each member of the association and each tuberculosis organization in the country with the request that the outline be followed for a year and any criticism based on actual use be sent to the committee before the next annual meeting.

The Relation of Tuberculosis to Life Insurance and to Insurance Companies.

DR. C. L. GREENE, St. Paul, called attention to the great loss to insurance companies from tuberculosis, and the need for enlisting them in the work projected by the association. He feels confident that insurance companies are ready to help if the matter is properly presented to them. The aid they might give in disseminating literature, with their enormous circularizing facilities, can hardly be estimated. They also should be solicited for aid in erecting sanatoriums in view of treating therein policyholders who contract the disease. Discussion of this subject led to the resolution adopted in the general meeting.

Early Diagnosis.

DR. ARNOLD C. KLEBS, Chicago, presented the report of a committee of five on this subject. The report discusses in detail physical signs and methods of diagnosis. The use of newer methods, such as tuberculin, iodin, and the Röntgen ray, is discouraged, emphasis being placed on the value of older means carefully applied. Discussion brought out many opinions favorable to the use of tuberculin. The need of better instruction of medical students in the diagnosis of incipient cases was particularly emphasized.

Open-Air Treatment of Surgical Tuberculosis.

DR. W. S. HALSTED, Baltimore, gave notes on 13 cases which illustrate the favorable results to be obtained from proper outdoor life for such patients. Some of the results were remarkable when compared with the slow progress, or lack of progress, of the case while indoors. This salutary effect is also shown by the results of the seaside treatment of surgical tuberculosis at Sea Breeze, Coney Island.

Role of Climate in the Management of Tuberculosis.

DR. C. L. MINOR, Asheville, presented an introductory report of a committee of six members, which was adopted after considerable discussion.

Influence of the Advent of the Tuberculous on Native Populations.

Dr. C. F. Gardner, Colorado Springs, said that theoretically the danger in this regard is very great. Practically, the general statement to be derived from answers to letters sent to 50 resorts is that non-imported tuberculosis in such places has not increased as a result of the advent of tuberculous patients.

Sanatorium Treatment of Consumption.

Several papers were read on each of the two subdivisions of this topic: (1) cases demanding sanatorium treatment regardless of climate, and (2) cases for which sanatorium control may be regarded *sub judice.*

Dr. J. P. C. Foster, New Haven, advocated the systematic detention in hospitals, by health officers, of indigent consumptives, even though they are able to earn their living. Such people are a menace to others and should be provided for by each city or town. The general result of sanatorium treatment as voiced by all the speakers is favorable; as yet there is nothing to equal the hygienic treatment of tuberculosis.

There was also read papers in the after-treatment of tuberculosis, forms of buildings suitable for open-air treatment, and clinical studies of the disease.

Dr. H. M. Biggs, New York, presented the introductory report of a committee of four members, which recommended for distribution among the people a leaflet somewhat similar to those used by health authorities in Germany.

At a testimonial dinner to Dr. Trudeau a general tribute of honor was paid Dr. Trudeau for his far-seeing efforts in behalf of the tuberculous, efforts which, at first derided, have, nevertheless, borne wonderful fruit.

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

Alcohol Habit.

T. Haven Ross, in *N. Y. Med. Jour.*, states that the first thing to do in the management of the alcohol habit is to regulate the diet and hours of rest. Explain to the patient, to some extent, the pathologic effect of the abuse of alcohol, and impress on him the importance of avoiding temptations.

Mental treatment is as important as that of drugs, and when the two are properly united in their proper proportions they are very efficacious. In regard to the treatment of the physical state, the first thing to do is to clear out the gastro-intestinal tract. The author prefers calomel in small doses, giving grain 1/10 (.006) hourly until a free watery stool is produced, followed by a saline, if there are any signs of nephritis present. The liver must be kept active, and this is best accomplished by the administration of the following combination:

℞.	Enonymin	gr. 1/8		008
	Res. podophylli	gr. 1/20		003
	Pulv. ipecac	gr. 1/8		008
	Hydrarg. chloridi mitis	gr. 1/8		008
	Aloini	gr. 1/12		005

M. Ft. capsula No. i. Sig.: One such capsule at bedtime.

The foregoing dose should be regulated to meet the needs of the individual case, as one natural bowel movement, as a rule, should be obtained daily and in some cases two or three times daily. In the general systemic treatment, the author relies on strychnin and ergot assisted by a safe hypnotic and a proper tonic. He prefers the nitrate of strychnia to any other form, giving it in doses of gr. 1/30 (.002) every four hours. This dose should be increased or diminished to suit the individual case. This dose, according to the writer, stimulates digestion, and tends to reduce excitability of the brain and spinal cord. It stimulates respiration, the heart's action and vasomotor centers, replaces alcohol as a stimulant, and acts as a "mental" antidote to alcohol. Care should be observed in its use in order to avoid any cumulative action. He prefers this preparation to nux vomica. Ergot is also recommended, given by the mouth or hypodermically, in order to avoid gastric irritability. Ergot should be given as often as necessary to control the circulation of the blood through the system and to prevent those symptoms that follow the reduction or withdrawal of alcohol. By this preparation the so-called "wet brain" can be avoided.

As a tonic and stomachic, one of the bitters containing iron is preferable. No rule should be laid down as to whether the alcohol should be withdrawn gradually or suddenly, as the physical and mental condition of the patient should decide that. In the majority of cases, however, the author recommends the withdrawal of alcohol at once and supplying the cravings of the system with the foregoing treatment. If opium is required at any stage of the treatment, it should be given without the patient's knowledge.

After the desire for drink has ceased, the hepatic and general tonics should be continued for some length of time afterward

Hiccough.

Robin, in *Med. Press*, recommends the following combinations in relieving hiccough:

℞.	Picrotoxin	gr. i		06
	Alcoholis q. s.			
	Morph. hydrochlor.	gr. i		06
	Atropinæ sulph.	gr. 1/5		012
	Ergotin	gr. xv	1	
	Aquæ laurocerosi	ʒiii	12	

M. Sig.: Five drops four times a day. And

℞.	Magnesiæ (calcined)	gr. xxx	2	
	Sodii bicarb.	gr. xx	1	30
	Codeinæ	gr. 1/5		012
	Bismuthi subnit.	gr. xv	1	
	Pulv. cretæ	gr. xv	1	

M. Ft. chartula No. i. *Sig.: One such powder three times daily.*

The *following combinations have also been recommended by* different authorities in the treatment of hiccough:

℞.	Strych. sulph.	gr. 1/4		015
	Spts. chloroformis.	m. x		65
	Alcoholis	ʒvi	24	
	Tinct. capsici	m. xii		005
	Aquæ q. s. ad	℥i	30	

M. *Sig.: One teaspoonful in a tablespoonful of* water and repeated two or three times during the day; or:

℞.	*Sodii bicarb.*	ʒiv	15
	Tinct. nucis vom.	ʒi	4
	Spts. chloroformi	ʒii	8
	Tinct. capsici	ʒi	4
	Tinct. gentianæ co.	℥iii	90

M. *Sig.: One teaspoonful after meals, in cases of gastric* or intestinal disturbance; or:

℞.	*Chloralis hydratis*	*gr. xx*	1	30
	Potassii bromidi	ʒii	8	
	Mucilag. acaciæ	℥iv	120	

M. Sig.: To be given at one dose by rectum.

When there is hypochondriasis or hysteria as a primary cause, the following combinations after Beasley are of value:

℞.	Moschi	gr. v		30
	Zinci valerianatis	gr. v		30
	Asafetidæ	gr. iii		20

M. Ft. capsula No. i. *Sig.: One such to be taken twice* daily; or:

℞.	Tinct. moschi	m. xxx	2	
	Tinct. sumbul	m. xxx	2	
	Tinct. cannabis ind.	m. v		30
	Tinct. ammon. valer.	m. xxx	2	
	Mucil. acaciæ	ʒi	4	
	Aq. chloroformi q. s. ad	℥i	30	

M. Sig.: To be taken at one dose and repeated once during *the day; or:*

℞.	Moschi	gr. v		30
	Mucil. acaciæ	ʒss	2	
	Spts. chloroformi	m. xv	1	
	Aquæ cinnamomii q. s. ad	℥i	30	

M. Sig.: One such dose every four hours in extreme cases.

Malarial Hemoglobinuria.

W. E. Sparkman, in *Ther. Gazette*, recommends the following in the treatment of cases of malarial hemoglobinuria accompanied by severe symptoms, such as nausea, vomiting, high temperature, repeated chills and weak heart, jaundice and a suppression of urine.

℞. Sodii sulphitis	ʒii	60	
Aq. cinnamomii q. s. ad	℥viii	240	

M. Sig.: One tablespoonful every three hours until the jaundice begins to clear and the urine becomes normal.

For nausea and vomiting he recommends brandy on crushed ice or the application of mustard to the epigastrium and the following internally:

℞. Bismuthi subnit.	ʒii	8	
Cerii oxalatis	ʒii	8	
Acidi carbol.	ʒss	2	
Mucil. acaciæ q. s. ad	℥iv	120	

M. Sig.: Two teaspoonfuls in ice water every three hours. Ergot should never be given, according to the writer, as it favors clot and suppression of urine. If the fever is high and there is great restlessness Sparkman recommends the following:

℞. Potassii bromidi	ʒii	8	
Spts. etheris nitrosi	ʒii	8	
Chloralis hydratis	ʒii	8	
Acetanilidi	gr. xl	2	65
Elix. simplicis q. s. ad	℥iv	120	

M. Sig.: One tablespoonful every two or three hours until quiet is obtained.

[The amount of acetanilid in this prescription is five grains to the dose—a dangerous amount to give at intervals of two or three hours.—ED.]

For partial or complete suppression of urine, acetate of potassium with infusion of digitalis in "watermelon seed" tea is the best diuretic. This is aided by the high rectal injection of a hot normal salt solution.

As long as the urine remains bloody, the following is of value:

℞. Tinct. digitalis	ʒiv	15	
Tinct. ferri chloridi	ʒiv	15	
Ammon. muriatis	ʒi	4	
Elix. simplicis q. s. ad	℥iii	90	

M. Sig.: One teaspoonful in ice water every three hours.

If this should be rejected it should be repeated at once.

To guard against heart failure strychnin should be given, gr. 1/30 to 1/40 (.002-.0015) every three or four hours in whisky or brandy. Lemonade is regarded as a good diuretic and allays thirst. The author recommends also raw, ripe tomatoes as of great value in relieving nausea and in allaying the irritability of the stomach. After the urine has cleared for thirty hours, he cautiously begins on quinin and stops it if there is any sign of recurrent hemorrhage. During convalescence he recommends the following:

℞. Quin. sulph	gr. ii		12
Ferric sulph.	gr. ii		12
Strych sulph.	gr. 1/40		0015
Ext. gentianæ	gr. 1/4		015

M. Ft. pil. No. i. *Sig.: One such pill three times daily.*

Chronic Dyspepsia in Infants.

The preparation most commonly used at the outset in the treatment of chronic dyspepsia, according to Hutchison, are alkalies and aperients. The latter are of use, no matter whether constipation is present or not. Their usefulness may be accounted for on the excessive production of mucus theory, as they are regarded as good solvents of mucus and they also assist in getting rid of that mucus already dissolved. In this connection he recommends the following combination:

℞. Potass. bicarb.			
Potass. citratis, āā	gr. v		30
Tinct. nucis vom.	gtt. i		06
Infus. gentianæ co.	ʒii	8	

M. Sig.: To be given at one dose in a little water and the dose repeated fifteen minutes before meals.

The potassium bicarbonate is said to dissolve the mucus. The citrates are given as these children often have thick urine and pass an increased amount of urates. The nux vomica increases the appetite, as also does the gentian. The author prefers as an aperient, in the beginning, one that contains calomel and rhubarb, as follows:

℞. Pulv. rhei	gr. viii		50
Sodii bicarb.	gr. x		65
Hydrarg. chloridi mitis cum creta	gr. i-ii		06-.12

M. Ft. pulvis No. i. Sig.: One such powder every night or every other night, and the amount increased or reduced to suit the age of the child. The author prefers rhubarb because of its astringent as well as of its aperient action. It has a tonic effect on the flabby mucous membrane. The sodium bicarbonate is added to dissolve the mucus.

After two weeks great improvement will be noticed and tonics should then be prescribed, including iron in some form. But the iron and tonics must be deferred until the tongue is clean and the stomach in good condition. It is a great mistake to treat these patients early with cod-liver oil. In some cases, gastric pain is a troublesome symptom and may require opium to control it. The best preparation is Dover's powder, given in two or three-grain (.12-.20) doses. If lienteric diarrhea be present, small doses of opium given before meals constitute the best treatment, giving perhaps two minims (.12) of the tincture combined with a drop of liquor potassii arsenitis and a little nux vomica. By this treatment, peristalsis is kept in abeyance when food is introduced into the stomach. If headache be present, the eyes should be refracted.

Medicolegal

Undue Prejudice Not Insane Delusion.—An undue prejudice based on some reason, the Supreme Court of Nebraska holds, *in re* Clapham's estate, is not an insane delusion.

When Husband Not Liable for Services.—The Supreme Court of Wisconsin reverses, in the case of Morgenroth vs. Spencer, a judgment on a verdict directed for the plaintiff for professional services performed by the plaintiff, a physician, for the wife of the defendant. It says that when the defendant's wife deserted him without cause, and continued to live apart from him without his consent, she did not take with her the defendant's credit. Her misconduct deprived her of power to bind her husband, and it was incumbent on the plaintiff to prove her authority, in order to make out a case against the defendant. *Prima facie*, a woman living separate and apart from her husband has no power to bind him, and it is incumbent on the person furnishing necessaries to a wife so living apart from her husband to show that she is so living for justifiable cause. In the case at bar, if the wife of the defendant was living separate and apart from him without cause and without his consent, and he did not authorize the employment of the plaintiff, the plaintiff could not recover from him for the services. It was a question for the jury to determine whether a rupture had taken place between husband and wife, of such a nature as to deprive her of authority to pledge his credit for necessaries supplied. The action being for necessaries furnished to the wife, the general rule applied that the testimony of the wife is admissible in an action brought against the husband to recover for such necessaries.

Liability of Physician and Surgeon for Malpractice.—The First Appellate Division of the Supreme Court of New York says, in the malpractice case of MacKenzie vs. Carman, that the liability of a physician and surgeon to a patient is based on two obligations which he assumes in undertaking the care of a patient. The first is that he possesses "that reasonable degree of learning and skill which is ordinarily possessed by physicians and surgeons in the locality where he practices, and which is ordinarily regarded by those conversant with the employment as necessary to qualify him to engage in the business of practicing medicine and surgery"; and the second is that he undertakes to use reasonable care and diligence in the exercise of his skill and the application of his learning to accomplish the purpose for which he was employed, and he is "to use his best judgment in exercising his skill and applying his knowledge," and he is liable for an injury "to his patient resulting from want of requisite knowledge and skill, or the omission to exercise reasonable care, or the failure to use his best judgment." The law thus requires a surgeon to possess the skill and learning which is possessed by the average member of the medical profession in good standing, and to apply skill and learning with ordinary and reasonable care. He is not liable for a mere error of judgment, provided he does what he thinks is best after a careful examination. He does not guaranty a good result, but he promises by implication to use the skill and learning of the average physician, to exercise reasonable care, and to exert his best judgment in the effort to bring about a good result.

No Damages for Disfigurement.—The United States Circuit Court of Appeals, Eighth Circuit, says, in Southern Pacific Company vs. Hetzer, a personal injury case brought by the latter party, that, in some states, notably in Wisconsin and Michigan, evidence of mental pain caused by disfigurement, apart from the physical suffering produced by an injury, is admissible to enhance the damages in an action for personal injury. The rule which has been adopted by this court, however, and the rule which seems to it the better one, is that in actions for personal injury the plaintiff may recover for the bodily suffering and the mental pain which are inseparable and which necessarily and inevitably result from the injury. But mortification or distress of mind from the contemplation of the crippled condition and of its effect on the esteem of his fellows, that mental pain which is separable from the physical suffering caused by the injury, is too remote, indefinite, and intangible to constitute an element of the damages in such a case, and evidence of it is inadmissible. Mental pain of this character, the suffering from injured feelings, is intangible, incapable of test or trial. The evidence of it, like that which convicted the alleged witches, rests entirely in the belief of the sufferer, and it is not susceptible of contradiction or rebuttal. Many other causes, the education, temperament and sentiment of the sufferer, the mental attitude, the acts and words, of his friends and acquaintances, concur with the accident to cause this mental distress, in such a way that it is impossible to separate and ascribe the proper part of it to the injury caused by the defendant. And the amount of the mental pain caused by any disfigurement necessarily varies so with the character, temperament and circumstances of the injured person that no just measure of the damages from it can be found. Such mental suffering is too remote, intangible, and immeasurable to form the basis of any just adjudication, and the objections to the testimony of the plaintiff concerning it should have been sustained.

Enforceability Against Estate of Contract Between Physicians.—The Supreme Court of Missouri, Division No. 2, says that in the case of Rosenwald vs. Middlebrook, administrator, and others, the plaintiff sought to have a court of equity enforce specific performance of a contract alleged to have been made with the defendants' intestate, a physician, during his lifetime, whereby it was claimed that, in consideration of certain acts and services to be performed by the plaintiff, the physician was to leave to him his entire estate. But in order to have justified the chancellor in decreeing a specific performance of this contract, it was absolutely essential, the court says, that it should, first, be made to appear to him that the contract was in fact made, by proof so cogent, clear, and forcible as to leave no reasonable doubt in the mind of the chancellor of its terms and character; second, it was equally essential to show that such contract was made on a valuable consideration, and that a fraud would be perpetrated on the plaintiff unless the contract be performed; third, on the allegations in the petition the consideration of the contract sought to be enforced was predicated on the acts to be performed by the plaintiff, and therefore it was essential that the proof should satisfy the chancellor that the facts performed referred to and resulted from that contract, and were such acts as would not have been done unless on account of the very contract made, and with a direct view to its performance. Furthermore, here being a young practicing physician, entering into a partnership with the head of a medical school, who stood high in his profession, with elaborately furnished offices, with all the modern conveniences, the court is not willing to say that the formation of this partnership was any sacrifice of professional standing or business interests on the part of the plaintiff, although it might be said, from a moral standpoint, that the decedent did not measure up to the standard that would ordinarily be required in selecting a partner. That he attended to all of the correspondence, the business connected with the offices, looked after the wants of the senior partner, cared for him when indulging excessively in intoxicants, the court thinks, were not acts anything out of the usual order, or which would not be expected to be performed by a young practicing physician who had entered into a partnership with an older physician of such marked ability and prestige.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

American Medicine, Philadelphia.

May 20.

1 *Remarks on Mitral Stenosis. F. P. Henry, Philadelphia.
2 *Artificial Dilation of the Cervix in Obstetrics. R. C. Norris, Philadelphia.
3 *Graves' Disease and Parathyroid Therapy. J. J. Walsh, New York City.
4 Surgical Treatment of Prolapsus Uteri, with Special Reference to the Operation of Colpectomy. C. G. Cumston, Boston.
5 Infection of the Urinary Tract by the Colon Bacillus, Simulating Uremia. J. R. Arneill, Denver.
6 *Intestinal Obstruction. D. F. Talley, Birmingham.
7 *New Asiatic Blood Fluke (Schistosoma Japonicum, 1904; Schistosoma Cattoi, 1905) of Man and Cats. C. W. Stiles, Washington, D. C.
8 *Hospital and Dispensary in the Warfare Against Tuberculosis. L. F. Flick, Philadelphia.
9 *Working Program for Associations for the Prevention of Tuberculosis—National, State and Local. E. T. Devine, New York.

1. **Mitral Stenosis.**—Henry says that the diagnosis of mitral stenosis in the first stage is comparatively easy. At that time there is a presystolic murmur easily recognized as such by the fact that it is followed by the first and second sounds, both audible at the apex. The second stage is indicated by disappearance of the second sound at the apex, this being due to dilation and hypertrophy of the right ventricle and to feeble propulsion of blood into the aorta. The presystolic murmur continues. According to the literature, the onset of the third stage is, in contradistinction to this, marked by disappearance of the presystolic murmur and by the establishment of signs of tricuspid regurgitation. Henry has found that it is only exceptionally that the presystolic murmur disappears with the onset of signs of tricuspid regurgitation. Again and again he has heard a typical low-pitched, rumbling, presystolic murmur, coinciding with pulsation in the veins of the neck, a few hours before the death of the patient. Another phase of mitral stenosis which he emphasizes is an extreme arrhythmia—a veritable delirium cordis—which may persist without intermission for months or even for years. In such cases, there is no murmur, and in them it is impossible to distinguish the sounds from each other. The arrhythmia may continue indefinitely and may constitute the chief expression of the lesion. The clinical syndrome of these cases is the following: Marked anemia, with somewhat dusky skin and cyanotic lips; a tendency to bronchial catarrh, marked periods of improvement, with little or no diminution of the arrhythmia, and no edema whatever, or none until shortly before death.

2. **Artificial Dilation of the Cervix in Obstetrics.**—According to Norris, the value of any method of artificial dilation should be measured by its power to evoke uterine contraction and thus to promote effacement of the internal os. He concludes as follows: 1. The necessity for the induction of a premature labor by a method requiring less than 12 hours, is extremely rare. 2. The method most frequently employed, and most satisfactory in his experience, is a combination of partial mechanical dilation, followed immediately by the insertion of a bougie and an extraordinarily large Voorhees' bag incompletely filled. 3. For the relatively rare cases in pregnancy or labor requiring accouchement forcé, the choice of rapid mechanical dilation depends especially on the character of the cervix, the general state of the patient, and the

firm determination not to attempt too rapid dilation. Bossi's or De Seigneux's instrument is cleaner, is less tiresome, is applicable to the same class of cases, and is not more dangerous than manual forcible dilation. 4. Duhrssen's vaginal section is a most valuable operation in the hands of an expert obstetric surgeon, and should be preferred to rapid metallic dilation, except when conditions favorable to the latter are unmistakably present. 5. For the treatment of the grave forms of placenta prævia and of accidental hemorrhage, Duhrssen's hysterotomy, in the hands of an expert vaginal operator, should prove the best method of treatment ever offered.

3. Graves' Disease and Parathyroid Therapy.—Walsh reports four cases of Graves' disease treated with desiccated parathyroids. In two mild cases, the remedy seemed to produce a good effect. In two severer cases, the remedy failed utterly to give relief, and in one case seemed to cause an exacerbation of the symptoms somewhat as if thyroid extract were being given. It is not absolutely certain that the parathyroid material was absolutely free from all admixture with thryoid substance, though it was very carefully prepared for these cases.

6. Intestinal Obstruction.—Talley emphasizes the fact that in acute cases the life of the patient depends on early recognition of the obstruction and prompt surgical intervention. He advises that when a patient suffers extreme pain in the abdomen, especially in the epigastrium, which is not relieved by an ordinary dose of morphin, when he vomits and his bowels do not respond in 10 to 15 hours to the usual purgatives and enemas, intestinal obstruction should be diagnosed; the error then will be on the side of safety for the patient.

7. New Asiatic Blood Fluke.—Stiles calls attention to the fact that the newly described Chinese blood fluke (*Schistosoma cattoi* 1905) may be identified with a fluke (*S. japonicum* 1904) described for man and cats in Japan. The new species is characterized by the absence of spinose warts on the male, and the absence of spines on the egg, while the African blood fluke (*S. hæmatobium*) has spinose warts on the male and a terminal or subterminal spine on the egg. Clinically, in cases of infections with the African fluke both vesical and rectal symptoms have been reported, but all reported infections with the new Asiatic fluke have thus far been intestinal. Another important clinical point is the possibility that some of the cases of cerebral distomatosis, heretofore attributed only to the lung fluke (*Paragonimus westermanii*) may possibly be due to the new Asiatic blood fluke.

8. Hospital and the Dispensary in the Warfare Against Tuberculosis.—Flick says the great preventive influence of hospital treatment in pulmonary tuberculosis is due to the isolation of the patient during the time when the disease is most contagious and he is least able to help himself. During the last stage of the disease it is very difficult to keep a consumptive clean, and the frequent changes of linen, which are necessary, make the process too expensive to be practiced in the homes of the poor. In the hospital, the patient can be taken through his exacerbations and even through the terminal stage without danger to others, and without too great an expense, by reason of the discipline which exists. Hospitals form schools and propaganda for the spread of knowledge about the disease. Next to the hospital the dispensary undoubtedly is the most available and the most potent weapon in the warfare against tuberculosis. The two work well together because they are adapted for the early ambulatory cases and the advanced helpless cases. For ambulatory cases, the dispensary gives every facility for successful treatment.

9. Prevention of Tuberculosis.—Devine advises the adoption of a definite program in the fight for the prevention of tuberculosis. It should have at least ten features: 1. The maximum of sunlight and fresh air should be obtained for all mankind at work, at leisure, and at sleep. 2. An abundance of simple, and yet sufficiently varied nourishing food—pure milk and fresh eggs. 3. Early diagnosis of every case of pulmonary tuberculosis by the family physician, and the utmost attempt to secure compliance with his advice as to medical treatment and diet, change of work, or complete release from regular employment, change of residence, or removal to a hospital or sanatorium—such advice to take into account all the circumstances of the individual patient. 4. Registration of all cases irrespective of condition in life. 5. The establishment of institutions which will best serve the purpose for advanced cases. 6. The establishment, on a generous scale, of state, municipal and private sanatoria for treatment of patients in the earlier stages. 7. Publicity regarding means of preventing infection and in regard to the other elementary rules of hygiene, through every known channel of public instruction. 8. Conferences for interchange of views and experiences among those who are working for the prevention of tuberculosis. 9. Relief in various forms, especially in the form of special diet for those who can and must be treated at home. 10. Further research. We need more knowledge, better authenticated records, further comparison of results, more accurate knowledge—for these we must have laboratories, endowments, favorable conditions for scientific research, travel for observation and study abroad, and training for fruitful investigation.

Boston Medical and Surgical Journal.

May 18.

10 Satisfactory Prostatectomy. B. Tenney, Boston.
11 *Paramount Value of Localized Râles as a Sign of Incipient Phthisis. H. B. Whitney, Denver, Colo.
12 Therapeutic Value of Some Digestive Preparations, and the Indications for the Use of Pepsin in Diseases of the Stomach. R. F. Chase, Boston.
12½ *Infections of the Respiratory Tract with Influenza Bacilli and Other Organisms; Their Clinical and Pathologic Similarity and Confusion with Tuberculosis. F. T. Lord.

11. Value of Localized Rales as a Sign of Incipient Phthisis.—According to Whitney, the great and predominant value of localized râles in the diagnosis of incipient tuberculosis consists, first, in their almost constant presence at a time when other local signs are absent or, at most, indefinite. Second, in their practically unmistakeable character, thus differing widely from other signs which represent merely deviations from the normal. Third, in the fact that when occurring at an apex they are almost pathognomonic, other conditions which might produce them being exceedingly rare. While, therefore, other local signs are of great value, especially for the few experts who by long experience have learned their limitations and the frequent difficulty of interpretation, the presence of localized râles must remain the essential guide to early diagnosis for the rank and file of the profession.

12½. Infections of the Respiratory Tract.—Of the 186 nontubercular infections of the respiratory tract observed clinically by Lord (for the most part bronchitis), a mixed infection with various organisms was found in 120 cases (64 per cent.); a comparatively pure infection with one group of organisms was found in 66 cases (36 per cent.). Of these pure infections, those due to influenza bacilli comprise the largest group, with fewer cases of pure infection with the pneumococcus, etc. The pure infections, however, tend to become mixed as the case progresses, and the observer must then remain in doubt—in the presence in the sputum of two or more groups of organisms—as to the relative importance of any one of the infecting agents. In the clinical picture, the symptoms of onset, and the course and duration of the different pure infections, there seems to be nothing distinctive. They all tend to set up diffuse or local bronchitis and a varying degree of bronchopneumonia. The amount of prostration may be as great in one as in the other. The pathologic picture in cases of bronchopneumonia due to the different organisms, likewise seems to be similar in the character of the exudate, its varying extent and intensity, and the tendency, in a small proportion of cases, to end in permanent damage to the pulmonary substance. These results of pulmonary invasion are not infrequently mistaken clinically for pulmonary tuberculosis. Of eighty-five cases of pneumonia, associated with various organisms, well-marked localized pulmonary abscesses or duration or both, were found in eight. No tuberculosis could be demonstrated at autopsy. From the clinical resemblance of such cases to pulmonary tuberculosis, the presence of the tubercle bacillus in the sputum must be regarded as the only infallible indication of this condition.

Medical Record, New York.

May 20.

13 *Cystoscopy and Renal Lavage. F. M. Johnson, Boston, Mass.
14 *Disorders of the Nervous System Arising in the Course of Chronic Nephritis. W. M. Leszynsky, New York.
15 *Treatment of Eczema and Impetigo in Children. C. W. Allen, New York.
16 Relation of the Medical Profession to the Restriction of Tuberculosis. S. P. Wise, Millersburg, Ohio.
17 *Case of Hodgkin's Disease with but Slight Enlargement of the Superficial Lymph Glands. H. F. Stoll, Hartford, Conn.
18 Ventral Decubitus as an Aid to Drainage for Diffuse Purulent Peritonitis. R. M. Harbin, Rome, Ga.

13. **Cystoscopy and Renal Lavage.**—The object of Johnson's paper is to set forth the indications demanding cystoscopy and renal lavage, the rules that it is wise to observe in preparing for the cystoscopy, the description of the *modus operandi*, and the difficulties likely to be encountered in the procedure. The indications for and the conditions governing treatment are the following: 1. From microscopic examinations of the mixed urine, and from the clinical history of the case, information justifying the procedure is obtained 2. A consideration of the nervous and physical condition of the patient will teach us whether interference must be immediate or whether measures to render the operation less painful may first be employed. 3. The eradication of all conditions tending to interfere with the use of the cystoscope, such as stricture, enlarged prostate, sensitive urethra, or an irritable bladder. 4. The condition of the heart must receive special attention, for often surgical shock plays an important postoperative part. Lavage of the kidneys consists in the direct application of some preparation, such as boracic acid solution containing silver nitrate, in strength of from 1-12,000 up to 1-7,000, or .5 of 1 per cent. of one of the organic silver salts, a healing oil, an astringent, or a hemostatic. There are no standard solutions; experience is the teacher, and conditions found, the guide. Only a small amount, from 15 to 30 minims, should be injected at any one time; a total of from one to four ounces can be used at each lavage of both kidneys. Each catheter is then removed in turn, a good plan being constantly to inject some of the fluid during withdrawal, as then the whole urinary tract is influenced and receives a thorough washing-out.

14. **Disorders of Nervous System in Chronic Nephritis.**—Leszynsky emphasizes the well known but deplorable fact that many of the seemingly insignificant or apparently trivial symptoms which arise in the course of unrecognized chronic nephritis do not, as a rule, receive the attention that their gravity merits. Aside from the various neurasthenic manifestations occurring in the patients with chronic nephritis, many of the transitory subjective nervous phenomena arising during the course of the disease are the result of uremic (or possibly other) intoxication in varying degree, while nearly all of the transitory objective nervous phenomena, and the more permanent and incapacitating or fatal complications, are primarily due to the concomitant arterial disease. Hence, palpable evidence of arteriosclerosis and of high blood pressure is usually of the greatest significance. The many forms which the nervous disturbances attendant on nephritis assume are described in detail, and several illustrative cases are cited in which the failure to recognize the uremic condition underlying symptoms apparently of nervous origin led to serious results.

15. **Eczema and Impetigo in Children.**—Allen says that, although many cases of infantile eczema depend on improper feeding and faulty digestion or assimilation, the majority are susceptible of cure by local measures alone. A judicious combination of restricted or regulated diet, internal measures, when indicated, and external application will usually result in rather prompt cure. The treatment of any case must depend largely on the view taken of the origin and nature of the affection. The indications are usually to soothe and to protect a highly inflamed pruriginous area, to destroy germs, and to act in deeper infiltrations and dilated vessels. In general, it may be said that symmetry of lesion speaks for constitutional origin, asymmetry for local cause. Among general local measures to fulfill the objects of disinfection, protection, soothing, and favoring the growth of new epidermis, the use of methylene blue solution is especially advocated. A 3 to 5 per cent. watery solution is allowed to dry in well, and a thin layer of collodion is quickly applied. Nitrate of silver, in from 5 to 20 per cent. strength, salicylic acid, resorcin, sulphur, ichthyol, etc., are also recommended and the indications for their use in different cases described. A favorite prescription is: Resorcin, .5 to 1 per cent.; washed sulphur, 2 to 4 per cent.; lanolin, 5 to 10 per cent., and lard up to 100. Impetigo contagiosa, according to the author, is frequently associated with pediculosis capitis, and in treating it the parasites should be sought for. Crusts are to be removed with potato flour poultices and 10 per cent. ammoniated mercury ointment applied, or green soap solution, followed by 1-1,000 bichlorid of mercury. Ichthyol, salol, betanaphthol, surphur and red sulphid of mercury are also useful in some cases. As a rule, however, ointments are not so good as washes.

17. **Case of Hodgkin's Disease with but Slight Enlargement of the Superficial Lymph Glands.**—In the case reported by Stoll, the following points seem of especial interest: 1. The development of acute symptoms associated with an eruption nearly four years after the beginning of the disease. 2. The slight involvement of the superficial glands. 3. the occurrence of periodical abdominal distention and tenderness. 4. The alternating periods of pyrexia and apyrexia. 5. The unusually severe anemia. 6. The disappearance of the glands before death. The general characteristics of the disease are discussed at length, and in regard to treatment it is stated that improvement of the nutrition by the rest cure and an abundance of fresh air is very important. Arsenic, in the form of Fowler's solution, should be given in relatively large doses. The glands should be exposed to the *x*-rays for a long period, and the earlier such treatment is begun the better will be the results. Removal of the glands is to be resorted to only when pressure symptoms are marked.

New York Medical Journal.

May 20.

19 *Metacarpal Fissure, a Fracture Type Not Heretofore Described, and Some Points Regarding Treatment of Metacarpal Fracture. C. Beck, New York.
20 *Successful Method of Treating Fracture of the Femur in Infancy. W. G. Stern, Cleveland.
21 *Puberty and Adolescence in Their Relation to the Etiology of Epilepsy. W. B. Spratling, Sonyea, N. Y.
22 Syphilis with Late or Absent Secondary Eruption. R. N. Willson, Philadelphia.
23 *Recognition and Differentiation of Râles in the Lung. F. E. Beal, New York.
24 *Alkaline Beverages in the Treatment of Pneumonia. J. B. Todd, Syracuse, N. Y.
25 Virginia Laws Regulating the Sale of Poisons. G. E. Barksdale, Richmond, Va.
26 Diagnosis and Treatment of Typhoid Fever. W. Jones, Atlanta, Ga.

19. **Metacarpal Fissure.**—Beck points out that a large number of the so-called dislocations and contusions of the metacarpal region are in reality fractures, and that this has been established positively by the Roentgen ray.

20. **Fracture of Femur in Infants.**—Steven describes a method of treating fracture of the femur in the newborn and in children up to the age of two years which, in his experience, has proved entirely satisfactory. It enables the mother to nurse the child with very little effort, and enables her to keep the child scrupulously clean; it holds the fragments in apposition without subsequent deformity; allows only a minimum amount of shortening, and there is freedom from pain on moving the child for necessary changes of clothing, etc. For the first three days, enough fixation is secured to keep the child quiet by bundling it in a feather pillow. After the third day, the limb is placed in vertical extension and kept there for at least three weeks. The child rests on a pillow placed on a low stand next to the bed and should not be above the level of the mattress. Its body is parallel to the length of the bed and its head at about the position of the mother's breast. The adhesive straps for the extension are put on in the usual fashion, after the skin has been thoroughly cleansed with alcohol and ether, and should reach well up over the trochanter. Zinc oxid plaster should always be used, as it is far less irritating to the delicate skin; by using sterilized zinc oxid adhesive plaster, the extension can be left

unchanged for the entire three weeks; an adhesive plaster which lacks at all in "stickiness" and is liable to slip, can not be used. It is impossible in these small limbs to get the extension straps to stay unless *they are bound down* by circular turns around the malleolus, the top of the tibia, the condyles of the femur and the groin; care should be exercised not to get the circular turns too tight, as that might lead to venous stasis. The groin and buttocks are next carefully bandaged with a two-inch bandage of oiled silk, held in place by adhesive strips; next a flannel bandage is carefully applied from the toes to the groin to keep the leg warm, and this again is protected by an oiled silk bandage reaching from the knee to the groin. No spica turns about the pelvis are to be used. The extension is carried upward with wire to a hook firmly fastened into the ceiling, then over for three or four feet, so as to get the weight away from the baby, and then down over another hook for a foot or two, where the weight is placed out of reach of either head or hands. Half of a five pound bag of salt is the best form of weight; it is cheap, can be easily fastened, and the weight can be changed at will by adding or taking out salt. *In all cases the weight* should be just enough to lift the buttock off the pillow.

21. **Puberty and Adolescence and Epilepsy.**—Spratling summarizes his paper as follows: 1. That we can, and must, in many cases of epilepsy that appear from the twelfth to the sixteenth and eighteenth years, coincident with the establishment of the menstrual flow in women, and with the passing of boyhood into manhood, ascribe to these changes the power of inducing well-defined convulsions that may be epileptic. 2. That except in the most remote and exceptional instances, these periods alone in normal individuals have no power to induce epilepsy, or even epileptoid phenomena. 3. That by searching carefully we shall find in most cases of epilepsy at this period, either a previous history of convulsions, usually in infancy, or a family and personal history so tainted with a tendency to disease that epilepsy under the stress of puberty is plainly invited.

23. **Recognition and Differentiation of Rales.**—For the purpose of a more simple differentiation and recognition of râles, Beal proposes to divide râles heard in the lung into two classes, the dry and the moist. He points out that the principal distinction between a dry and a moist râle is, that a dry râle has always some duration, while a moist râle is always instantaneous.

24. **Alkaline Beverages in Pneumonia.**—In order to promote leucocytosis throughout the course of the disease and to preserve the proper alkalinity and specific gravity of the blood, Todd advises the administration of alkaline saline drinks, from the inception of the disease throughout its entire course. Of a solution of two and one-half grains of sodium chlorid and one grain of potassium bicarbonate to the ounce of cold water, from six to eight ounces should be given every two hours. The addition of a teaspoonful of lemon juice converts it into a refreshing effervescent drink. A generous diet, a well-lighted room and an abundance of oxygen are essential. Todd says that the administration of alcohol, strychnin and the so-called heart tonics in pneumonia is analogous to sustaining a starved horse with a whip when he fails to draw his load. He does not condemn these remedies absolutely, but says that in his opinion there has been no occasion for their use.

Medical News, New York.

May 20.

27 *Recent Advances in Our Knowledge of the Chemical Processes of Digestion. L. Mendel, New Haven, Conn.
28 Laennec and His Stethoscope. C. N. B. Camac, New York.
29 *Recent Advances in the Knowledge of the Movements and Innervation of the Alimentary Canal. W. B. Cannon, Boston, Mass.
30 *Case of Pneumococcus Infection of the Hip. L. W. Ely, New York.
31 Pneumonia—Etiology and Epidemiology. E. F. Wells, Chicago.
32 Remarks on the Proper Cleansing of a Running Ear. H. A. Alderton, Brooklyn, N. Y.

27. **Chemical Processes of Digestion.**—In this paper Mendel refers to facts of historical interest, and reviews present day knowledge on this subject.

29. **Movements and Innervation of the Alimentary Canal.**—Cannon discusses the mechanical activities of the different portions of the alimentary canal—esophagus, stomach, small and large intestine, and the sphincters, and also the extent to which these movements are independent of the central nervous system, and the manner in which they are affected by their connection with that system.

30. **Pneumococcus Infection of Hip.**—In Ely's case, the hip trouble came on about two weeks after an attack of pneumonia. It became necessary to open the joint, and the examination of the pus evacuated revealed the pneumococcus. The patient finally succumbed to an empyema.

St. Louis Medical Review.

May 13.

33 *Irrational Surgery, or Surgery Gone Mad. B. Robinson, Chicago.

33. **Irrational Surgery.**—Robinson discusses what he terms the extent of practice of several notorious fad operations. He says modern surgery appears to have delegated to itself unlicensed liberty to invade with impunity any and every organ. Some of the *operations mentioned in this connection* are oöphorectomy, trachelorrhaphy, the various "pexies," the use of the dilator and curette, gastroenterostomy, the appendicectomy fad, the varicocele fad, and the ocular myotomy fad. He says that hysteropexy is practically an unnecessary, irrational operation, and that it is an unsafe surgical procedure accompanied by disastrous and fatal issues. Numerous postmortems and dangerous surgical interventions have been the final story of hysteropexy. The other operations referred to are discussed in a similar manner.

Lancet-Clinic, Cincinnati.

May 13.

34 Ptosis of Abdominal Viscera. F. L. Rattermann, Cincinnati.
35 *Report of a Case of Popliteal Aneurism Treated by Arteriorrhaphy. H. O. Pantzer, Indianapolis.
36 Digestive Disturbances—a Clinical Study. J. H. Schroeder, Cincinnati.
37 *Radical Cure of Hernia. H. C. Wyman, Detroit.
38 *Radium—Its Value in Medicine. M. Metzenbaum, Cleveland.

35. **Arteriorrhaphy for Aneurism.**—Pantzer made use of simple arteriorrhaphy in a case of traumatic saccular aneurism of the popliteal artery, following a gunshot wound, which finally ruptured. Because of certain conditions present, the opening in the artery was sewed somewhat transversely, as is done in the Mikulicz-Heinecke operation for stenosis of the pylorus. Previous to operation the patient had pyelitis and cystisis, which became worse and finally caused the patient's death. The portion of the popliteal operated on was resected and showed a perfect closure of the opening. The caliber of the artery was actually wider at the seat of suture than above and below. Pantzer concludes as follows: 1. That traumatic aneurism is amenable to suturing. 2. That even much atheromatous degeneration of the artery wall does not necessarily contraindicate suture, at least as a temporary expedient. 3. That fortifying folds of the aneurismal sac are not absolutely necessary. 4. That early surgical interference in these cases seems clearly indicated.

37. **Radical Cure of Hernia.**—Wyman's paper emphasizes the importance of including in operations for the radical cure of hernia measures tending to reduce the volume of the abdominal contents and to increase the size and strength of the abdominal walls, and all operations having this end in view are commendable. The suture material used by him in hernia cases is linen No. 35. It stands sterilization better than other material, readily becomes encysted and never works out after tardy and tedious suppuration. Dressings are rarely disturbed until healing is complete. Wyman says that it is surprising what changes can be wrought in diminishing intra-abdominal pressure after operations for hernia by radical changes in food.

38. See abstract in THE JOURNAL, Oct. 29, 1904, p. 1327.

American Journal of Obstetrics and Diseases of Women and Children, New York.

May.

39 *Technic of Abdominal and Vaginal Operations for the Relief of Fibromyomatous Tumors of the Uterus. J. R. Goffe, New York.

40 Care and Feeding of Premature Infants. J. L. Morse.
41 Sarcoma of the Uterus, with Remarks on Radiotherapy. H. Grad, New York.
42 *Persistent Mentoposterior Positions. C. B. Reed.
43 *Yeast Treatment of Acute and Chronic Vaginitis and Endocervicitis. H. Schiller, Chicago.
44 *Vaginal Atresia Complicating Labor. J. C. Hirst, Pennsylvania.
45 Secondary Metastatic Implantation of Carcinoma in the Vagina. E. A. Schumann, Philadelphia.
46 Hematoma of the Ovary. M. A. Tate, Cincinnati, Ohio.
47 *The Uterine Curette.* H. A. Kelly, Baltimore.

39. **Relief of Fibromyomas of Uterus.**—In 1888, Goffe first published his modification of Schroeder's operation for the removal of uterine tumors. The technic of this operation has been improved somewhat, and as performed to-day is as follows: After opening the abdominal cavity, and while the tumor is still *in situ*, the ovary and tube on one side are drawn up, and a ligature is passed through the upper border of the broad ligament and tied; thus controlling the ovarian artery. One end of this is rethreaded into the pedicle needle, and the broad ligament is transfixed a second time near to the tumor and just above the uterine artery; this is also tied. A temporary ligature is now placed near the horn of the uterus to control any reflex hemorrhage from the tumor. The broad ligament is cut down to the lower point of transfixion, and the tumor is then rotated and the same method pursued on the other side. The tumor is then delivered through the wound, and the lower angles of the incisions through the broad ligaments on either side are connected by an oval incision through the peritoneum, first across the anterior and then across the posterior surface of the tumor. Flaps are then dissected down, the one in front carrying the bladder and ureters into safety. One end of the ligature is again threaded into the pedicle needle and is passed inside these peritoneal flaps close to the cervix and below the uterine artery. This is repeated on the opposite side and the ligatures cut short. The tumor is then cut away on a level with the internal os. The cervical canal is disinfected with applications of carbolic acid. The flaps are then stitched together with a running catgut suture over the top of the stump, care being taken to make them cover all the ligatures on either side. Goffe uses catgut ligatures on the broad ligaments and also for stitching the flaps. The advantage of using a single ligature for each broad ligament is that it puckers up the end of the ligament and carries it down alongside of the cervix, so that the raw surface is very easily covered by the peritoneal flaps. In a general way, the advantages of this operation and the superiority over the method of total extirpation consist in the following points: 1. It involves the least possible loss of blood; indeed it is rare for any hemorrhage to occur. 2. It is easy of execution, for the reason that the stump of the cervix can be brought up near to the abdominal wound and the details of disposing of the traumatic tissue carried on with ease and comfort to the surgeon. 3. It is applicable in its general plan to all cases of fibroid tumor. 4. It requires less time than total extirpation. 5. Convalescence, as a rule, is rapid and free from complication, moreover, the patients require no special after treatment whatever. It is not necessary to put gauze in the cervix or in the vagina, consequently there are no dressings to be attended to. The after treatment consists in regulating the functions of nature, and in removing the stitches from the abdomen. The open bowel treatment is employed, and, as a rule, the patient urinates without assistance.

42. **Persistent Mentoposterior Positions.**—Reed claims that engagement of the face in mentoposterior positions does occur, and that the face may reach the pelvic floor without anterior rotation. In almost all cases, the anterior rotation occurs spontaneously. Failure of the chin to rotate anteriorly is a definite indication for interference. In entering the pelvis, the length of the child's neck may permit the head to sink well down into the pelvis before the thorax is involved. Delivery of the unrotated chin, although extremely rare, is by no means impossible, and occurred in his series in 22.6 per cent. of the impacted cases. In 75 cases of impacted mentoposterior position, the maternal mortality (11.6 per cent.) under all circumstances about equals the maternal mortality (12 per cent.) of placenta prævia under aseptic conditions. The fetal mortality under all conditions is only a trifle higher than the fetal mortality of intrapartum eclampsia under the best and most modern conditions, and is far better than the reputed (100 per cent.) mortality. In the management, the position must always be corrected if the rotation does not occur spontaneously. Version is the operation of election, if the head is not engaged and manual flexion has failed. It is contraindicated after engagement. Manual correction by the Baudelocque, De Lee, Thorn or Volland methods should always be attempted. Forceps should be used with the utmost caution, if at all, and as a last resort before mutilating operations, for the fetal mortality is very high (50 per cent.), and, if employed, only the axis traction instrument should be chosen. If symphyseotomy is done, care should be taken to operate while the child is vigorous enough to justify it. Asepsis in the conduct of these cases ought to show a considerable reduction in the mortality figures.

43. **Yeast in Vaginitis and Endocervicitis.**—Schiller advocates the use of fresh brewer's yeast in the treatment of these affections: After cleansing the vagina with sterile water, two teaspoonfuls of fresh yeast and one teaspoonful of grape sugar solution or "bierwuerze" is introduced into the vagina through a speculum so that the portio and walls of the vagina are bathed with it. If this can be done at the patient's home it is preferable; if not, after a few minutes Schiller uses a tampon saturated with "bierwuerze" or grape sugar solution. This process should be repeated every 48 hours. After from 8 to 12 hours, a vaginal douche should be used. Affections in the vagina or on the cervix produced by *Saccharomyces albicans* or blastomycetes have never been observed after using yeast; a simple vaginal douche removes all the yeast used. The cases most suitable for this treatment are those of acute and chronic gonorrhea of the vagina and cervix, as well as those with or without gonococci in the discharge. Cases of purulent vaginitis and endocervicitis of other sources will derive more or less benefit, while cases of pronounced affection of the endometrium with a very watery discharge are not so easily influenced. He states that he has had no experience regarding the use of this method as a preparatory treatment for vaginal operations.

44. **Vaginal Atresia Complicating Labor.**—Hirst says that a Cesarean section is never necessary for uncomplicated vaginal stenosis. All these cases can be managed by manual dilatation, instrumental dilatation, hydrostatic dilatation, or, at the worst, deep lateral incisions of the cicatricial portion of the canal, followed by extraction of the child with forceps or by version. After the delivery the vagina must be repeatedly dilated, until the injuries or incisions have healed, in order to prevent the recurrence of the stenosis in a more serious form. Some of these cases will spontaneously dilate as the head descends and obviate the need of any operative interference. In the presence of complications, as in the case reported, Cesarean section may be necessary. If the operation is performed, the only one to be considered is the Porro operation, or hysterectomy.

Interstate Medical Journal, St. Louis.

May.

48 *Peculiar Alveolar Melanoma of the Choroid with Metastases. R. L. Thompson.
49 *Functional Diagnosis of Kidney Diseases. W. M. Robertson, St. Louis.
50 The Relation of the Defective to the Community. H. C. Wyman.
51 Acute Prostatitis. G. E. Lydston, Chicago.

48. **Alveolar Melanoma of Choroid.**—Thompson reports a case of tumor of the eye, coming from the choroid, which appeared in two forms—a definite pigment-bearing mass, and a spindle-cell mass which practically showed no pigment. The autopsy performed on the patient five years later showed metastases of both types of tumors in various regions. Sections of these metastases showed some of them to be alveolar melanoma and spindle-cell sarcoma while others showed a mixture of both varieties of tumor. The absence of intercellular substance, the tendency to grow in an alveolar arrangement, the presence of pigment, and the relation of the cells

to the blood vessels identified the tumor as an alveolar melanoma.

49. **Functional Diagnosis of Kidney Diseases.**—Robertson presents, in brief, the practical workings of the method as carried out in the clinic of Professor Casper. He concludes: 1, That *functional* diagnosis presupposes the ability to collect the urine from each kidney separately; 2, that in the present state of our knowledge the determination of the freezing point of the blood for the diagnosis of kidney sufficiency is of no value; 3, that the determination of the freezing point of the mixed urine, and the percentage of sugar in the mixed urine after the injection of phloridizin, on account of the wide variations to which they are subject, give no idea as to the sufficient action of the kidneys; 4, that the determination of the freezing point of the urine from each kidney, and the percentage of sugar in the urine from each kidney after the injection of phloridzin, give the most valuable information as to the existence of disease on the one side and of kidney sufficiency on the other; 5, that functional diagnosis in no way supplants or does away with the older methods of kidney diagnosis, that it is a supplement to them, and that while its employment requires much time and careful attention to detail, if it is carefully carried out it will add much to the surgeon's peace of mind and to the patient's welfare.

Canada Lancet, Toronto.
May.

52 Fever in Puerperium. K. C. McIlwraith, Toronto.
53 Lacto-Farinaceous Diet in the Intestinal Autointoxication. R. M. Beauchant, Portiers, France.
54 *The Prevention of Apoplexy. T. C. Allbutt, Cambridge, England.

54. See abstract in THE JOURNAL, May 6, 1905. p. 1487.

Pacific Medical Journal, San Francisco.
May.

55 Flat Foot. E. H. Smith, San Francisco.
56 Doctor and the Man. A. Shiels, Oakland.
57 Micrococcus Rheumaticus; Its Cultural and Other Characters. J. M. Beattie.
58 Organized Water as a Food. J. U. Lloyd, Cincinnati.

Iowa Medical Journal, Des Moines.
May 15.

59 Supraorbital Pains. L. W. Dean, Iowa City.
60 Intestinal Obstruction. G. E. and J. L. Crawford, Cedar Rapids.
61 Recent Work in Joint Diseases. A. Egdahl, Iowa City.
62 Physician and the Non-English Speaking Patient. F. Rosenbladt, Audubon.

Dominion Medical Monthly, Toronto.
May.

63 Croup E. Seaborn, London, Ont.
64 Status of Suprarenal Therapy. S. Floersheim, New York City.

American Journal of Urology, New York.
May.

65 Nephrectomy for Pyonephrosis, with Remarks on Functional Kidney Capacity. M. Krotoszyner, San Francisco.
66 Prostatic Abscess. J. A. Hawkins, Pittsburg.
67 Symptomology of Prostatic Diseases. J. L. Boogher, St. Louis.
68 Incontinence of Urine. T. M. Reade, Springfield, Ohio.
69 Technic of Cystoscopy and Ureteral Catheterization. L. W. Bremerman.
70 Alterations in the Posterior Urethra as a Factor in Neurasthenia. A. Ravogli, Cincinnati.

Canadian Practitioner and Review, Toronto.
May.

71 Neurology and the Prevention of Insanity in the Poor. C. Meyers, Toronto.
72 Toxemia of Pregnancy. K. C. McIlwraith, Toronto.
73 Home Treatment of Pulmonary Tuberculosis—Cases in Practice. E. Plater, Toronto.

Kentucky Medical Journal, Louisville.
May.

74 Treatment of Enlarged Prostate. I. Abell, Louisville.
75 Typhoid Fever. F. L. Lapsley, Paris.
76 Etiology and Pathology of Typhoid. V. V. Anderson, Barboursville.
77 Acute Articular Rheumatism, with Special Reference to Etiology and Diagnosis. A. C. Willmott, Hutchison.
78 Rheumatism. H. A. Elkourie, Nashville, Tenn.
79 Adenoids in the Naso-Pharyngeal Space. M. F. Coomes, Louisville.
80 Progress in General Medicine. J. A. Flexner, Louisville.

Old Dominion Journal, Richmond, Va.
May.

81 Edible and Poisonous Fungi of North Carolina, with Illustrations. J. W. Peacock, Thomasville, N. C.
82 Pneumonia: a Suggestion as to Treatment. L. G. Pedigo, Leatherwood, Va.
83 Typhoid Fever. W. J. Strother, Culpepper, Va.
84 Retro-Displacements of the Uterus. A. E. Baker, Charleston, S. C.

Northwest Medicine, Seattle, Washington.
May.

85 Rôle Played by the Nose and the Mouth in the Etiology of Tuberculosis. H. Stillson, Seattle, Wash.
86 Tuberculosis. I. Janson, Seattle, Wash.
87 Etiology of Tuberculosis and Its Governing Factors in Treatment. J. J. Leiser, Seattle, Wash.
88 Pancreatic Inflammations in Their Relationship to Cholelithiasis and Their Treatment. A. W. M. Robson, London, England.

St. Louis Courier of Medicine.
May.

89 The Shiga Bacillus. C. Fisch, St. Louis.
90 Vesicovaginal Fistulæ. R. Hill, St. Louis.
91 Baby Incubators on the "Pike." J. Zahorsky, St. Louis.
92 Ruediger Blood Test for Typhoid. G. C. Crandall, St. Louis.
93 Epithelioma of the Face in a Young Child. M. J. Lippe, St. Louis.
94 Review of Methylene Blue Eosin Blood Stain. G. C. Crandall, St. Louis.

Journal of the Mississippi State Medical Ass'n, Vicksburg.
May.

95 History of the State Insane Hospital: Supplemented by Some Observations on the Insane. T. J. Mitchell, Jackson.
96 Response to Address of Welcome. G. L. Harbour, Vossburg.
97 A Health Report from Bolivar County. H. L. Sutherland, Rosedale.
98 Gonorrheal Conjunctivitis. M. H. Bell, Vicksburg.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.
May 6.

1 Discussion on Influenza. T. C. Allbutt, Cambridge.
2 Epidemiology on Influenza. H. F. Parsons.
3 Record of a Year's (1904) Operations in Clarence Ward (Gynecologic) of the Royal Victoria Hospital, Belfast. J. W. Byers and R. J. Johnstone, Belfast.
4 *Diazo-Reaction in Tuberculosis. C. W. Budden, Liverpool.
5 Tetany as a Complication of Gastric Dilatation. A. Trimble, Belfast.
6 Preliminary Note on a Leucocytozoan of the Dog. C. A. Bentley, Borjulie Tezpur, Assam.
7 Acute Poisoning by a Single Castor-Oil Seed. A. G. Gullan, Liverpool.

4. **Diazo-Reaction in Tuberculosis.**—Budden has watched the reaction in 3,000 persons, and has performed it many times in each, in order to determine its value as a diagnostic agent. He found that one or two precautions are required to obtain accurate and uniform results: 1. The test can not be performed except during the day, or by the use of pure white light. 2. The urine should not be more than 24 hours old, and should be kept covered. 3. Fresh solutions must be employed. The nitrite should be renewed weekly, the acid once a month. The proportions of the acid and the nitrite require accurate measurement. An excess of the latter, even in slight amount, will annul a delicate test. The 3,000 cases tested comprised 600 persons in health, and 2,400 suffering from disease. Of those in health, not one yielded a positive reaction. Of the remaining 2,400 cases, reactions were found in 96 cases of various forms of tuberculosis; 18 cases of measles; 17 cases of enteric fever; 5 cases of typhoid; 4 of acute lobar pneumonia; 1 case of acute bronchopneumonia; 1 of acute bronchitis; and 4 of puerperal septicemia, a total of 146 positive reactions in 880 cases examined. The remaining 564 cases, comprising almost every acute malady of common occurrence, continuously yielded a negative test. Speaking of the value of the test as an aid in the prognosis of tuberculosis, Budden says that his investigations lead him to believe that the reaction is not of any value. It is certainly true that those patients who gave the reaction have nearly all died; it is certain that in most cases the course was rapid; it is also true that its appearance and disappearance corresponded to the exacerbations and to improvement; it is also a fact that those *not* giving the reaction are patients who have shown improvement in their clinical course. This, to a large extent, agrees with what has been previously written. Were this all, such facts would indeed be sufficient, but they reveal only half the truth. The patients giving positive reaction have died, but they were precisely those patients for whom no hope could ever be entertained; many of these cases

have run a rapid course, but an equal number have run a slow course and even have shown improvement. The appearance of the reaction coincides with the exacerbations of the tuberculosis process, but it follows the onset of the graver symptoms, and though it disappears with improvement, such disappearance again follows the suspension of the alarming signs; while, again, it may disappear because the patient is growing weaker. A reaction blowing hot and cold in this manner can not be of very great reliability. Lastly, patients who have not given the reaction have mostly been in the early stages when hope is justifiable, while if it is absent in the latter stage it means nothing, since its appearance is intermittent, present one week, absent the next. It is probable that every fatal case of tuberculosis will yield the reaction at some period of its course. In view of the frequency of the intermissions, we can not say that any case is negative unless it has been tested constantly for long periods. Of the 17 patients who gave negative results and yet died, 6 succumbed to intercurrent diseases. Of the remainder, 2 were admitted *in extremis*, when the reaction is known to fade, so that it is not an unjustifiable conclusion to suppose that the other 9 were tested during an intermission.

The Lancet, London.

May 6.

8 *Some Old and New Remedies. W. Carter, Liverpool.
9 *Nutrition and Malnutrition. W. H. Allchin, London.
10 *Ten Abdominal Sections for Abnormal Pregnancies and Obstructed Labors. J. S. Riddell, Aberdeen.
11 *Blood Changes in Meningitis in Children. S. W. Curl, Colchester.
12 Two Cases of Trichromic Vision. F. W. Edridge-Green, Cambridge.
13 Observations on the Blood. C. W. Cunningham.
14 Tetanus and Chloral Hydrate. J. Maberly, Woodstock, Cape Colony.
15 Case of Hematoma of the Ovary Simulating an Attack of Appendicitis. H. W. Wilson, London.

8. Some Old and New Remedies.—In this paper Carter considers oil of turpentine, adrenalin, morphin and pilocarpin, illustrating his remarks by reference to cases.

9. Nutrition and Malnutrition.—In this, the second of the Lumleian lectures on this subject, Allchin considers the digestion, absorption and destination of the proteids, carbohydrates, and fats.

10. Ten Abdominal Sections.—Riddell gives the history of 10 abdominal sections for abnormal pregnancies and obstructive labors; 2 cases of ovarian tumor (dermoid cyst) obstructing labor; 2 cases of uterine fibroid, one obstructing labor, the other complicating pregnancy; 4 cases of extrauterine pregnancy; a case of tumor (chondroma) narrowing the pelvic outlet and necessitating Cesarean section; and a case of omental adhesions disturbing pregnancy.

11. Blood Changes in Meningitis.—Curl found that in tuberculous meningitis in children the red blood corpuscles usually are present in normal or increased numbers; that the majority of cases show no leucocytosis; that the eosinophiles are reduced in number, and that the large lymphocytes and transitional cells are generally present in increased proportions.

12. *Trichromic Vision.*—In the two cases reported by Green, the patients saw only three colors in the bright spectrum—red, green, and violet.

Journal of Tropical Medicine, London.

May 1.

16 Incidence of Disease in Hongkong. W. Hunter, Hongkong.
17 Spirilla Fever in South China. L. Hill.
18 *Form of a Malarial Parasite Found in and Around Jerusalem. J. Cropper, Ramullah, Palestine.
19 Congenital Macrodactylitis in the Philippines. I. W. Brewer.

18. Malarial Parasite Found in Jerusalem.—Cropper describes a new form of malarial parasite found in and around Jerusalem and occurring for the most part in children, who frequently have enlarged spleens—30 per cent. at five years or under. The patients had been ill often for months, with fever, generally of a quotidian type, rarely tertian. In about twelve cases the parasite was found in persons who complained of little or no fever, with perhaps headache, anemia, and sallowness. As a rule, the number of parasites in these cases was very small, and was only found after long search. This form of malaria described by Cropper is most refractory to quinin, although it yields in the end. The parasite corresponds with this, and can be seen days after quinin has been given in adequate doses (15 to 30 grains daily). The parasite described has occurred in 192 cases out of a total of 300 positive examinations; sometimes as a mixed infection, but generally alone. The youngest patient was 2½ months old, and 68 cases occurred in children under five years.

Annales de l'Institut Pasteur, Paris.

Last indexed page 1646.

20 (XIX, No. 4.) Propriétés bactériolytiques et anticytasiques du venin de cobra. F. Noc.
21 Sur un hématozoaire endoglobulaire nouveau d'un mammifère. J. J. Vassal (Annam).
22 Sur la signification du "Bacillus coli" dans les eaux potables (in drinking water). H. Vincent.
23 De la valeur thérapeutique de l'antitoxine dans le sérum antidiphthérique. L. Cruveilhier.
24 New Procedure for Detecting Ammonia and Its Salts in Drinking Water.—Etude sur un nouveau procédé de recherche de l'ammoniaque et des sels ammoniacaux. Applicable à la caracterisation des eaux potables. A. Trillat and Turchet.
25 Reaction of Land Turtle to Anthrax, to Glanders, to Rabies, to Tetanus and to Various Other Infections.—Réaction de la tortue terrestre à quelques maladies infectieuses. Remlinger and Osman Nouri (Constantinople).

Revue de Chirurgie, Paris.

Last indexed page 1321.

26 (XXV, No. 4.) *Foreign Bodies in Joints.—Des corps étrangers articulaires et en particulier des corps traumatiques au point de vue expérimental et histologique. V. Cornil and P. Coudray.
27 *Apropos des anévrysmes carotidiens. Pacheco Mendes (Bahia).
28 *Les gastrorragies dans l'ulcère simple de l'estomac. T. Tuffier and Jeanne. (Commenced in No. 2.)
29 *Des hémorragies intestinales consécutives à l'opération des hernies en général. L. Sauvé. (Commenced in No. 2.)

26. Foreign Bodies in Joints.—The origin and anatomic evolution of foreign bodies in the joints, especially the traumatic, have been studied by Cornil and Coudray by experiments on dogs, also from anatomic specimens and in the clinic.

27. Aneurism of Carotid Artery.—Mendes reports 2 cases of aneurism of the right common carotid artery; both patients were cured by extirpation of the sac. The patients were men of 62 and 42, and the first signs of the tumor had been noticed fourteen and eleven months previously, respectively. A ligature was thrown around the artery below, but in one case it was not drawn tight, the ends of the thread being held by assistants who were instructed to tighten the ligature if hemorrhage occurred. In the other case, the ligature was tied at once. The sac ruptured in each case, but the ligature prevented all hemorrhage of any amount. The operations proceeded smoothly and the patients recovered without mishap. The difficulty of extirpating the sac limits the application of this mode of treating aneurism of the carotid. Every case does not require extirpation, and the future of the intervention should not be jeopardized by resorting to it in all cases. Most of the patients with aneurism of the carotid are elderly, and it seems inadvisable to operate after the age of 60, as the operation is a serious one, and its benefits in these cases are only for a few years. The other contraindications are those of surgery in general.

28. Hemorrhage from Simple Ulcer of the Stomach.—The results of surgical intervention were 10 deaths in 15 operations before 1898, but Rodman's statistics in 1901 were 12 fatalities in 32 cases of acute hemorrhage. The results have been still more encouraging in a series of 24 more recent cases, the mortality being only 36.3 per cent. The mortality in operations for chronic hemorrhage has been about 12 per cent. and recurrences have been rare, Tuffier and Hartman never having encountered any. The details of all this material are summarized, and the lessons drawn that the ulcer is liable to be overlooked, and that the danger of infecting the peritoneum must be guarded against. The incisions should be ample and the interior of the stomach well lighted. The organ should be drawn out with thick compresses packed closely around it. The surgeon must guard against the slightest risk of infecting the serous membranes, even more than in operating in the pelvis. Preliminary lavage is superfluous and depressing. The various steps of the operations and the measures to meet the various indications are described in detail. Gastroenterostomy is the treatment *par excellence* for chronic hemorrhages, but experience has shown that food is liable to linger and to be digested in the stomach afterward as before, consequently the mechanism by which it cures the hematemesis is still obscure. The hemorrhage sometimes recurs. Two deaths in 27 operations of this kind have been recorded in the literature. Porge lost a patient from hemorrhage five days after a gastroenterostomy to relieve stenosis from an active ulcer. Körte has also reported a sudden, fatal hematemesis twelve days after posterior gastroenterostomy on a patient 45 years of age who had suffered for twelve years from pains and hemorrhages in the stomach. The pylorus was found thickened, adherent, and inoperable. The autopsy revealed an ulcer in the lesser curvature with erosion of a branch of the coronary. The conditions were similar in another patient who also died about the eleventh day from hemorrhage due to erosion of the coronary by an ulcer adherent to the liver. In acute hemorrhage the ulcer itself should be attacked by excision, ligature or suture if it is easy of access. If not, gastroenterostomy should be done, especially in case of an ulcer in the pyloric region, with hemorrhages rebellious to medical measures. Gastroenterostomy is frequently effectual, but is not absolutely certain.

29. **Intestinal Hemorrhages After Operations for Hernia.**—Sauvé has been able to find records of 28 such cases, and thinks that the number would be much larger if the stools were systematically examined for blood after herniotomies. The hemorrhages may be classed as avoidable or non-avoidable, the former including the traumatic hemorrhages due to taxis or to perforation of the intestine. The unavoidable hemorrhages are of three kinds, those occurring early, during the first twenty-four hours, the hemorrhage not severe, but indicating a bad condition of the bowel, with arterial ischemia complicated or not with venous thrombosis. This is the Schnitzler type. The second type is Ulmann's first variety in which, with a good postoperative general condition, hemorrhage occurs from the fourth to the seventeenth day, without a prodrome, and is serious, being the result of retrograde arterial thrombosis of the dropping off of an eschar limited to the mucosa. The description of the third type is also from Ulmann's pen. In this form the hemorrhage occurs tardily after an operation for non-strangulated hernia, and is the result of retrograde arterial thrombosis or is due to a sympathetic reflex or to vasomotor paralysis. The intestinal hemorrhage has always been found to be of arterial or capillary origin. In the Schnitzler type, medical measures are alone indicated to permit the recuperation of the intestine. The recovery of the patient is scarcely retarded by this complication. In the Ulmann types, the character of the stool and pulse should be the guide to intervention. When the bloody stools contain gangrenous scraps, grayish and fetid, the probabilities are that they are from a patch limited to the mucosa, and the hemorrhage will yield to ice, opium and ergot if the surgeon is sure that he did not overlook any patch of gangrene in the peritoneum. One case is on record in which a stricture developed later at the site of the eschar. When the stools contain almost pure blood and the pulse is rapid, showing that the hemorrhage is due to something more serious than the mere falling of an eschar, an operation is practically *in extremis* and is a serious undertaking. Research is now under way for the purpose of establishing the real pathogenesis of this latter form of hemorrhage and the prospects for successful interference. The article concludes with a summary of the 28 cases on record. The list does not include any from America. A number of the traumatic hemorrhages proved fatal.

Semaine Médicale, Paris.

30 (XXV, No. 16, April 19.) L'infiltration ecchymotique diffuse de la face à la suite des compressions du tronc. F. Lejars.
31 (Nos. 17-18.) A Fifth Eruptive Disease.—Une cinquième maladie éruptive: le mégalérythème épidémique. L. Cheinisse (Paris).
32 L'épidémie actuelle de méningite cérébrospinale dans l'Europe centrale.

Deutsche medizinische Wochenschrift.

33 (XXXI, No. 16, April 20.) *Ueber Retroversio uteri gravidi incarcerata an der Hand eines mit schwerstem wirklichen Ileus komplizierten genesenen Falles (One case.—Recovery). Dienst.
34 Zur Technik der Alexander-Adam-Operation. Robbers.
35 Zur Klinik und Aetiologie der Angina ulcerosa membranacea (Plaut-Vincent). M. Mayer and O. Schreyer.
36 *One Hundred Foreign Bodies in One Appendix.—Ein eigenartiger Fremdkörperbefund bei Appendicitis. Rebentisch.
37 *Zur Pathologie des Magen Carcinoms (of stomach). v. Tabora.
38 *Beiträge zur Lehre von der Beschäftigungsneuritis (occupation neuritis). H. Curschmann.
39 Zur Technik der Jodipin-Injektionen. Pelizaeus.
40 *Zur Behandlung der Meningitis cerebrospinalis epidemica. B. Kallmeyer (St. Petersburg).
41 To Reduce Danger to the Public from the Insane.—Die Gemeingefährlichkeit bei Geisteskranken und ihre Bekämpfung. Dannemann.

33. **Incarcerated Retrodisplaced Gravid Uterus with Ileus.**—The patient was a xii-para with a record of several abortions in the last few years. The retroflexion had probably occurred some time before and symptoms of incarceration developed about the fifth month of the pregnancy. The first symptom was a disturbance in urination, but catheterization every day for a week averted the danger of necrosis of the bladder from pressure of the incarcerated uterus. The urine was always sterile. The intestine became kinked and severe ileus resulted. When the uterus was restored to place the symptoms righted themselves at once. It is the first case on record of recovery from actual ileus under these circumstances.

36. **One Hundred Foreign Bodies in an Appendix.**—The patient was a woman of 74 who had had typhoid fever twenty years, and gallstone colic five years, previously. The appendix was included in an inguinal hernia and symptoms of appendicitis developed. When the purulent appendix was removed it was found to contain two grape stones, two other fruit stones, six splinters of enamel, three splinters of bone, a piece of a match, several small gravel stones and scraps of gallstones, a total of about 100 foreign bodies, of which the grape stones were the largest; 96 were large enough to be arranged on a card and photographed.

37. **Pathology of Gastric Cancer.**—Among the early signs of a cancer von Tabora mentions the small clots, less than the head of a pin in size, generally merely little black points, which are found in the siphoned-out stomach content. These clots are frequently encountered in case of cancer of the pylorus, although they may require the microscope for their differentiation. Hemorrhage in case of mere achylia gastrica is passed along out of the stomach too rapidly for the blood to form into clots. These clots have proved to be the very earliest symptom of cancer in the stomach, in his experience, preceding the discovery of lactic acid. The presence of Oppler's bacillus adds to the probability of cancer, as both require a long sojourn in the stomach. He has not found that the patients lose in weight, unless there is marked motor insufficiency with the cancer. A cancer on the lesser curvature may exist for months and years without appreciable loss in weight. With proper feeding, there may even be a gain in weight. He believes that it is almost impossible to distinguish between a benign ulcer and cancer of the pylorus, and the possibility of malignant transformation of the ulcer should not be forgotten. It is advisable to raise the general tone by dietetic and other measures before attempting any intervention on a pyloric cancer. If this is impossible, gastroenterostomy should be done first, and the radical operation should follow after an interval for recuperation. The benefit is sometimes surprisingly fine, even when a radical operation later is not practicable. The diagnosis of cancer of the normally located lesser curvature is more difficult, and this form of malignant disease is the despair of surgery. Certain surgeons have reported comparatively long survivals after operations, but analysis of their cases will show that the survivals are no more than the average life expectancy of cancers of the lesser curvature when left untouched. Even at best, the definite cures are less than 1 per cent. Exploratory puncture has a high mortality, and is very depressing to the patient, generally convincing him of the absolute hopelessness of his condition. As a rule, it may be said that a good Congo reaction, with increased amount of stomach content retained, indicates that the radical removal of the neoplasm is still possible, and gastroenterostomy is indicated. If the Congo reaction is negative, with increased

amount of stomach content retained, then gastroenterostomy to relieve the motor insufficiency is indicated. If the Congo reaction is negative, and if there is no retention of stomach content. and the lesser curvature is in the normal location, then any surgical interference is useless, except to relieve severe, urgent symptoms, when there is nothing to lose and everything to gain.

38. **Occupation Neuritis.**—A number of cases are described. In one the cause was the habit of resting the elbows on a high table while standing at work. Paresthesia, pain and weakness developed in the fourth and fifth fingers of the right hand, and proved rebellious to treatment. In another case, a young man made ice-cold applications to his inflamed eyes, pressing the cold cloth against the eye with his little finger. Symptoms of a neuritis developed in two or three days in this little finger, but the symptoms vanished under treatment after removal of the cause. An equally favorable termination was observed in a similar case in which the little finger had been submitted to a constant jar and vibration in tending a machine. The prognosis of a true occupation neuritis should be guarded, especially as lead poisoning, tabes, etc., are liable to attack first the radial and ulnar domain of the arm most used. The principal lesson of Curschmann's article is the importance of prophylaxis of these occupation affections.

40. **Treatment of Epidemic Cerebrospinal Meningitis.**—Kallmeyer's advice as to the treatment of this disease has been quoted in recent cable dispatches. He states that mercury, quinin, venesection and narcotics have proved ineffectual. A purgative dose of calomel may be useful at first, but after this enemata are preferable, if necessary. The internal or better still, the subcutaneous administration of arsenic is useful and harmless. It should be commenced the moment the disease is recognized. The doses should progressively increase, and slight fever is not a contraindication. The heart should be stimulated with camphor injections, and great attention should be paid to a suitable and strengthening diet. The main reliance should be on warm baths, at a temperature of about 93 degrees F., with douches of water at a temperature of about 90 degrees F. These baths should be commenced as early as possible in the disease, but not repeated, as a rule, oftener than once a day. Four attendants stand at the four corners of the bed and lift the patient by taking hold of the corners of the under sheet and lifting it with the patient into the bath tub. He remains in the bath for from eight to fifteen minutes, suspended in the sheet, and is then replaced in bed in the same way. Kallmeyer has thus treated and cured two very severe cases of the epidemic variety and a number of sporadic cases.

Münchener medicinische Wochenschrift.

42 (LII, No. 14, April 4.) *Ueber familiären Tremor. Schmaltz.
43 *Ueber periphere Schwangerschaftslähmungen (paralysis of pregnancy). R. Hoesslin.
44 Ueber Aphthæ tropicæ oder indische Spruw. H. Richartz.
45 *Experimentelles zur Pankreas- und Fett-Gewebsnekrose. Hess.
46 *Retrogression of Choked Disc with a Brain Tumor.—Ueber die Rückbildung der Stauungspapille bei Hirntumor. G. Flatau.
47 *Adenokarzinom und Sarkom am gleichen Menschen. H. Landau.
48 Ueber den Gebrauch der haltbaren Borsauer-Aluminumazetatlösung (durable solution of boric acid and aluminum acetate). K. Ludwig.
49 Blood Changes at High Altitudes.—Die vermeintlichen Blutveränderungen im Gebirge. E. Meissen.
50 Laryngeal Tuberculosis in Pregnancy.—Weiterer Beitrag zur Kehlkopfschwindsucht der Schwangeren, etc. O. O. Fellner.
51 Zur Frage der Schultzeschen Schwingungen (swinging). A. Hengge.

42. **Family Tremor.**—Schmaltz gives the family history of three families which include a number of cases of hereditary, essential tremor. He sifts the literature on the subject, and mentions that in his experience the tremor was never accompanied by any serious nervous affection. He personally examined 9 of the 20 cases of tremor in the 30 persons comprised in the three families he reports. Some of the "tremblers" lived to an advanced age. In some the tremor developed in childhood, in others not until late in life, after some accident to self or to dear ones. The tremor persisted through life, unmodified, in some, but in others, under hygienic measures, it improved or subsided altogether. All treatment proved ineffectual. Differentiation is based on the hereditary and family character of the tremor, the lack of disturbance in speech, vision or intelligence, the absence of vertigo, apoplectic symptoms and convulsions, and the benign, non-progressive type of the tremor.

43. **Peripheral Paralysis of Pregnancy.**—This writer last year published a comprehensive monograph on the central pregnancy paralyses. He grouped them as (1) those without anatomic findings: hysteric or myasthenic paralyses of pregnancy; (2) cerebral paralyses of pregnancy: due to apoplexy, albuminuria, thrombosis or embolism in the brain or to other brain affections; and (3) the spinal paralyses of pregnancy. Strümpell has recently observed a number of cases of this last category: actual spastic paralysis with an unmistakable connection with pregnancy and childbed. In the present article, von Hoesslin describes the peripheral paralyses of pregnancy, classifying them as myopathic and neuritic. The first group includes osteomalacic paralysis and polymyositis. The neuritic paralyses may be of traumatic, of toxic, or of postinfectious origin, and may extend by contiguity of nerve tissue. He reviews his extensive experience with each of these types, urging that more attention should be paid to the possibility of such an origin when studying any case of paralysis. The prognosis of the toxic neuritis of pregnancy is the more unfavorable the more extensive the paralyses and the more rapid their development. In 50 severe cases, 10 terminated fatally, while the more localized cases all terminated in recovery. The chances of curing by interrupting the pregnancy are by no means so favorable as in case of chorea gravidarum. Analysis of the hitherto published cases shows that the polyneuritic symptoms did not abate after spontaneous delivery, but rather displayed a tendency to exacerbation. The conclusion seems inevitable that the toxins causing the affection are produced even in the puerperium, possibly in connection with the involution of the genitalia. The pregnancy should not be interrupted, therefore, unless absolutely necessitated by some vital indication or commencing atrophy of the optic nerve. Under the circumstances, the procedure has undoubtedly been beneficial in many cases. Postinfectious puerperal neuritis is almost invariably ulnar and median, and gradual recovery is the rule. The prognosis of traumatic obstetric paralysis is better the less extensive the lesions. When limited to the leg, improvement is noted in a few weeks at farthest, but if extensive and accompanied by atrophy the prognosis must be cautious. Recurrence is also liable after childbirths later. In 92 cases of toxic neuritis of pregnancy or the puerperium uncontrollable vomiting had preceded its appearance in 19 instances. Hyperemesis gravidarum thus occurred in 34 per cent. of the 46 severer cases of toxic neuritis. In some cases they developed simultaneously. This speaks decidedly against the assumption of a hysteric nature for hyperemesis gravidarum, and points unerringly to autointoxication. The cellular elements of the nerves display degenerative changes with proliferation of the interstitial connective tissue. In about half the cases general polyneuritis with muscular atrophy results. In 16 of the 40 severer cases, Korsakoff's psychosis was more or less evident.

45. **Experimental Study of Necrosis of the Pancreas.**—The experimental research reported by Hess from Marburg showed that fatty necrosis can be induced in the pancreas of dogs by stenosis of the duodenum combined with a lesion of the papilla followed by introduction of fat into the pancreas. The saponification which is set up at once when the fat comes in contact with the pancreatic juice, causes a destructive process leading to necrosis. Many cases of apoplexy of the pancreas, etc., may be due to the penetration of fat from the intestines into the pancreas. The cicatricial sequelæ which follow a destructive process of this kind may explain certain cases of chronic indurative pancreatitis.

46. **Retrogression of Choked Disc with Brain Tumor.**—A girl of 16 exhibited symptoms of serous meningitis—headaches and choked disc—after typhoid fever. Both symptoms were relieved by mercurial treatment and by lumbar puncture which was repeated seven times in the course of six months

with the complete retrogression of the choked disc. The symptoms recurred three months later and the patient soon succumbed. The autopsy revealed a small-celled glioma in the left cerebellum. Flatau presents evidence from other writers which shows that lumbar puncture is sometimes able to induce the retrogression of choked disc even in case of a brain tumor.

47. **Variety of Tumors on One Individual.**—Landau thinks that the patient described holds the record for variety of neoplasms. He was a well-nourished, brunette man of 38, with several pointed exostoses on the lower jaw and an osteoma on the upper jaw as large as an apple. The cheek and legs showed several pigmented nevi, the rectum an adenocarcinoma and polypi and the mamma a fibrosarcoma. The two malignant growths were excised and the patient is in robust health to date, seven months since the operation.

Zeitschrift f. klinische Medizin, Berlin.

Last indexed page 1570.

52 (LVI, Nos. 1-2, Naunyn Festschrift, Part II). Catalase of Milk.—Die Katalase der Milch. E. Reiss.
53 Symptomatologie der Fistula gastrocolica carcinomatosa. G. Saudberg.
54 Diphtherie-Antitoxin Bestimmungen bei Mutter und Neugeborenem (in mother and newborn). H. Kayser.
55 Cytodiagnostik eines Falles von Lymphdrüsenkrebs (adenocancer). E. Ducros.
56 Behavior of Carbonic Acid in Stomach.—Das Verhalten der Kohlensäure im Magen. K. Loening.
57 Epileptic Spasms in 2 Cases of Diabetic Coma.—Ueber das Vorkommen epileptischer Krämpfe beim Koma der Diabetiker. J. Lossen.
58 Zur spezifischen Therapie der Febris recurrens (experiments with serotherapy). [illegible]
59 Focal Symptoms in [illegible] Dementia.—Ueber Herdsymptome bei [illegible]hrenden Psychosen. M. Rosenfeld.
60 Ueber unsere Kenntnis der mit dem Carcinom in ursachliche Verbindung gebrachten tierischen und pflanzlichen Mikroorganismen. E. Cohn.
61 Respirations-Versuche an diabetischen Menschen. A. Magnus.
62 Be[illegible]kranker (metabolism in [illegible]
63 Or[illegible] Dittrich's Plugs and De-[illegible] Microbes.—Ueber die [illegible] Dittrich'schen Pfropfen und den Nachweis von Fett-zersetzenden Mikroben. G. Schwartz and H. Kayser.
64 [illegible]lter Fall von Pneumomycosis asper-[illegible]
65 *[illegible] of Blood in Typhoid Stools.—Ueber [illegible] Blutspuren in den Darmabgängen von [illegible] deren Bedeutung. C. Petracchi.
66 [illegible] of Bactericidal Properties of Typhoid [illegible]diagnostiche Bedeutung der bakteriziden Eigenschaften des Blutserums Typhuskranker. K. Laubenheimer.
67 Ueber die Wirkung der v. Noordenschen Haferkur beim Diabetes mellitus (oatmeal in diabetes). S. Lipetz.
68 Influence of Pregnancy on Acute Infect[illegible] [illegible]gsten aku[illegible] [illegible]ich dem [illegible] von 188[illegible]. A. Brion.
69 (N[illegible]ls aetiologischer Factor. O. Rosenbach.
70 *Experimenteller Beitrag zur Tuberculose-Frage. F. Klemperer.
71 *Ueber das Wesen der Hämophilie. H. Sahli (Berne).
72 Ueber die Phosphate des Mageninhalts (of stomach contents). von Tabora.
73 Ueber Senkung und Agglutination von Blutkörperchen (of blood corpuscles). H. Brat.
74 Die Bakterien-Befunde bei Scharlach und ihre Bedeutung für den Krankheitsprocess (bacteriology of scarlet fever). G. Jochmann.
75 Fall von sensorischer Ataxie der Augen-Muskeln (ocular muscles). H. Feilchenfeld.
76 Zur Mechanik [illegible]
77 Influence of [illegible] Ueber die [illegible] auf die Aci[illegible] in Nos. 1-2

65. **Significance of Traces of Blood in Typhoid Stools.**—This article was reviewed editorially in THE JOURNAL for April 15, page 1203.

69. **Diagnosis as Etiologic Factor.**—Rosenbach refers to the way in which different physicians diagnose, some diagnosing a disease where another would regard it as highly dubious or non-existent. The consequence is that the statistics presented by different physicians vary widely on the same material. For example, since the presence of the plasmodia is now regarded as indispensable for the diagnosis of malaria, the number of cases of malaria now encountered is apparently very much less than in former years when all suspicious fevers were classed as malaria. The more accurate diagnosis merely pushes the cases of disease observed into other classes, and statistics show a "remarkable decrease in malaria of late years," while, in reality, the morbidity may be even higher than previously. This constant reclassification of diseases and acceptance of new standpoints for their consideration, is of extreme importance in the drawing of conclusions in regard to prevailing morbidity, and in our conceptions of the causes of mortality and of the results of treatment. He urges that the only reliable test for the efficacy of a new remedy or serum is for each alternate case to be treated with and the next without the remedy in question. Long series of cases treated alternately with and without, would solve the problem of the efficacy of the serum or other remedy better than it can possibly be solved in any other way. He complains that physicians display an incredible lack of critical judgment when new remedies are introduced.

70. **To Immunize Against Tuberculosis.**—Klemperer reports a number of experiments which have established the feasibility of rendering already infected cattle immune by subcutaneous injection of human tubercle bacilli. Calves infected with bovine tuberculosis and treated afterward with human tubercle bacilli remained healthy while the controls all succumbed to the bovine tuberculosis. Subsequent inoculation with human tubercle bacilli evidently exerts inhibiting and attenuating influence on bovine tuberculosis. Attempts to apply these conclusions to man are now under way. The first step was to determine the absolute harmlessness of subcutaneous inoculation of tuberculous persons with bovine tubercle bacilli. Klemperer established this by injection in his own person and also by injections in a tuberculous physician who volunteered for the experiments. The latter was injected fourteen times, and the bovine tubercle bacilli, after a single passage through a guinea-pig, were absorbed without any acute reaction, just as in Klemperer's experiments on himself. The same results were observed with 4 tuberculous patients who likewise volunteered their services. The harmlessness of the procedure, he states, is thus amply established, and the results observed suggest the possibility of successful immunization of persons in the early stages of tuberculosis by systematic subcutaneous injection of bovine tubercle bacilli. The guinea-pigs were inoculated with fresh tuberculous glands from cattle, injected subcutaneously into the abdomen. When the resulting tuberculosis was at its height, in about three or four weeks, they were killed and a piece of an inguinal gland and of the spleen studded with tubercles—about 2 gm. of substance in all—were ground in a mortar and suspended in 10 c.c. of physiologic salt solution with 1 to 4,000 formalin, and then filtered through gauze. He calls this the "suspension" (*Rindertuberkelbacillen-Aufschwemmung*). It is very virulent for guinea-pigs for as long as eight days. The human subjects were injected in the forearm with 0.25 c.c. of this suspension.

71. **Essence of Hemophilia.**—Sahli has had occasion to study hemophilia in three families and to trace it through two or three generations. The abnormally low coagulating power of the blood was a marked feature in these families. His observation and research force him by exclusion to accept the theory that the wall of the blood vessels, when it is injured, produces a "thrombokinase" or zymoplastic substance at the spot, which aids in the coagulation of the blood at this point and arrests the tendency to hemorrhage. In the hemophilic organism, the vessel walls are defective in this respect and do not produce the chemical substances which induce local coagulation. Treatment should aim to raise the general health, especially with a good and generous diet. Cases are on record in which the tendency to hemophilia vanished as the patients became robust. There is no reason for preference for a vegetable diet. This was suggested by the supposed analogy between hemophilia and scorbutus, for which in fact there is not the slightest justification. Compression and local gelatin applications may be useful to arrest the accessible hemorrhages especially when preceded by local application of adrenal extract. Gelatin internally is harmless but probably useless. There are no grounds for the internal or subcutaneous use of adrenal extract or ergot. Calcium chlorid internally is still awaiting judgment. The local application of ferric chlorid answers no purpose. It is

still a question whether or not benefit may be derived from local application of calcium chlorid or of the zymoplastic substances or "thrombokinase" in the form of tissue juices or their extracts. If applied, they should be forced into the lumen of the vessel as much as possible by the compressing bandage. The same or better results will probably be accomplished by pressing into the lumen of the bleeding vessel a thick and firmly applied 2 per cent. gelatin gauze dressing. Any attempt to apply the "thrombokinase" and zymoplastic substances otherwise than locally would probably be dangerous. A number of tests on 4 hemophilics are described and 60 articles from the literature are cited. The prompt success of local applications of gelatin in arresting the hemorrhage was confirmed again and again in his experience. Sahli's views were discussed in an editorial on page 1198.

Riforma Medica, Palermo and Naples.

78 (XXI, No. 13, April 1.) *Sulla etiologia e patogenesi del cancro. G. Maniscalco (Tricomi's clinic, Palermo).
79 Study of Metabolism in 2 Cases of Chronic Leukemia.—Ricerche di ricambio nella leucemia cronica. F. De Grazia.
80 (No. 14.) *Passage of Autotoxins and Agglutinins into Milk and Their Absorption.—Sui passaggio delle agglutinine ed antitossine tubercolari nel latte e loro assorbimento per via del tubo gastroenterico. F. Figari.
81 *Su alcuni punti della cura medica e chirurgica del male di Pott. A. Campani. *(Commenced in No. 13.)*
82 Sclerosi laterale amiotrofica familiare e Pellagra. T. Armando.
83 Sui disturbi oculari della paralisi generale e sul loro raffronto con quelli della tabe dorsale (ocular disturbances). C. Mannini.

78. **Origin of Cancer.**—Maniscalco has succeeded in producing in dogs lesions which resemble those of incipient cancer of the stomach. He opened the stomach and cut a pedunculated rectangular flap and also cut out a piece of the abdominal wall of the same shape and size, and sutured the stomach flap in its place. He then closed the stomach and abdomen as perfectly as possible. He scraped the mucosa of the stomach flap and irritated it every day with alcohol or ammonia or with a toothpick. The reaction that followed presented the features of cancerous growth, as he shows by various illustrations of sections. The results of these and other experiments which he describes have convinced him that the reaction to irritation causes a proliferation of the glandular elements which seek to substitute the constantly destroyed lining epithelium. The differentiation is not physiologic, but pathologic and irregular, and the elements of the epithelium behave irregularly also, growing downward into and through the muscularis mucosæ with metastasis in the submucous connective tissue. He thinks that this idea of pathologic proliferation of glandular tissue as the origin of malignant growths is sustained by the fact that cancer never develops in organs that have no glandular tissue.

80. **Milk of Cows, Goats and Rabbits Immunized Against Tuberculosis.**—Figari found that tuberculosis agglutinins and antitoxins passed into the milk of cows and goats actively immunized against the disease and into the milk of rabbits passively immunized. The kids born of immunized mothers inherit the defensive materials from the mother, and the amounts increase as they continue suckling. Calves and kids born of non-immunized mothers are able to absorb in the digestive tract the agglutinins and antitoxins contained in milk from immunized animals. More than this, these agglutinins and antitoxins are able to excite the formation of other agglutinins and antitoxins. Rabbits passively immunized by subcutaneous injection or by ingestion of the immunized milk are able to transmit in their milk to their young both agglutinins and antitoxins. Adult rabbits fed on milk from immunized cows absorb in their digestive tract the antitoxins and agglutinins contained in the milk, and their serum is found to have high agglutinating and antitoxic power. He describes his various experiments in detail. The results confirm in every particular, he adds, Maragliano's assertions in 1903 in regard to the possibility of the passage of the immunizing substances into the milk of immunized animals and their absorption in the digestive tract when fed to other animals, with their subsequent specific action in the organism.

81. **Pott's Disease.**—Campani thinks that the prognosis of this affection is not so grave as many believe. There is a tendency to spontaneous recovery, and if Nature is aided in time the final outcome is liable to be excellent. Various roads lead to the desired goal, but in general, puncture and rinsing out the cavity will be found sufficient. This simple procedure can be done by any one and almost anywhere, while it is much safer than other technics. He prefers to rinse the cavity after puncture with a 1 per 1,000 salicylic-acid solution, using at least 5 liters of the fluid, or until it emerges clear. It may be necessary to repeat the rinsing two or three times. He introduces the fluid through a Plessi return-flow canula, and the rinsing is easily done in a quarter of an hour. He gives the history of several cases thus treated and re-examined several years afterward. The affection healed slowly, but surely, after the injections, and the patients are all free from any disturbances. Those whose cases are described in detail were from 20 to 42 years of age. There is scarcely a trace of their former affection, and all have gained materially in weight, one nearly 60 pounds. In some of the cases the disease had caused paraplegia, but this rapidly subsided under cold hydrotherapy.

Medicinskoe Obozryenie, Moscow.

Last indexed page 1411.

84 (LXI, No. 8.) Ten Cases of Purpura and 3 of Hemophilia in Children.—Nyeskolko slutchaev purpuri i hemophilii u dyetei. I. M. Rakhmaninoff.
85 *Primary, Non-Diphtheric Croup.—O pervitchnom ne diphtheriinom krup. P. P. Istomin.
86 (No. 9.) *Conservative Vaginal Operative Treatment of Uterine Fibromata.—Konservativnii vlagalishtchnii metod op. lyetcheniya fibrom matki. V. V. Uspensky.
87 Influence of Diphtheria Toxin on Nitrogen and Mineral Metabolism in Animals.—O vliyanii diph. toksina no azotistii i mineralnii obmyen u zhevotkikh. M. M. Bremener.
88 *Urobilinuria.—O nakhozhdenii urobilina v motchye. M. G. Shtchegoleff.
89 (No. 10.) *Traumatic Facial Paralysis.—O paralitchakh llyzevogo nerva vslyedstvie nestchastnykh slutchaev. L. S. Minor.
90 O neuropathitcheskoe nepodvizhnosti pozvonotchnika ("rigid spine"). M. Shaikevitch.
91 *Functions of Great Omentum.—O funktziakh bolshogo salnika. L. A. Jacobson.
92 (No. 11.) *K diagnostikye raka zheludka (of gastric cancer). I. Rusloff.
93 Motility of Lymphocytes and Its Significance in Cytodiagnosis.—Aktivnaya podvizhnost lymphocytov i znatchenie eya dlya cytodiagnosa. V. T. Polyakoff.

85. **Non-Diphtheritic Croup.**—Istomin describes 8 cases of severe membranous croup in which it proved impossible to detect the presence of the Loeffler bacillus. Streptococci, influenza bacilli and diplococci were found, and symptoms of grippe accompanied or preceded the manifestations of croup, the maximum phase being reached about the fourth day. Intubation was required in some of his cases and he never failed to inject antidiphtheritic serum; it produced an unmistakably favorable effect, supplemented by hot mustard foot baths and inhalation of steam.

86. **Conservative Vaginal Removal of Uterine Fibromata.**—Uspenski reports 12 patients thus operated on between 1883 and 1903. The operations proceeded smoothly and the after-results were excellent.

88. **Urobilinuria.**—The Schlesinger zinc acetate test for urobilin in the urine was found both sensitive and reliable in the experiences reported. They are summarized in tabulated form. They demonstrate that a certain amount of urobilin can always be found in normal urine, although the traces may be too minute to be revealed by ordinary reagents. If fluorescence appears in the fluid while it is being tested with zinc acetate under ordinary light, this is a sign of abnormally increased destruction of red corpuscles somewhere in the body. The presence of urobilin in the urine can be accepted as a sign of the toxic action of the products of some infection on the red corpuscles, or else as a sign of diapedesis of the red corpuscles, as in transudates. In a case of myocarditis the liver was apparently normal, but its insufficiency was revealed by its inability to transform the urobilin into bilirubin.

89. **Traumatic Facial and Trigeminal Paralysis.**—Three cases are described in detail and are discussed from the standpoint of industrial accident insurance. Two are illustrated and the claims for damages are established on the amount of disability.

91. **Functions of Great Omentum.**—Experiments were made on 8 dogs to test the functions of the great omentum. The animals bore resection of part of the omentum without trou-

ble, and no lesions could be discovered in stomach or liver which could be attributed to the resection. The capacity of transudation shown by the omentum is slight, about equal to that of the intestinal serosa. Further tests also demonstrated that the omentum possesses considerable capacity of absorption. His experiences confirmed those in the clinic in regard to the lesser sensitiveness of the omentum in comparison with the intestine.

92. **Diagnosis of Cancer of Stomach.**—Rusloff relates the clinical history of 4 cases of gastric cancer to bring out certain diagnostic points. Among them is the differential importance of a systolic murmur heard in the epigastric region, caused by compression of the trunk of the aorta by the cancerous tumor in the stomach. This sign has not been credited with the importance which it deserves for the diagnosis of a gastric cancer, especially in those cases in which the cancer develops backward rather than toward the front, and is thus less accessible to palpation. The systolic murmur also serves to locate a suspected cancer. It is heard on the linea alba, or a little to the left of it, on the middle third of a line connecting the ensiform process with the umbilicus. The murmur can not be heard from the rear, in which it differs from the findings in cases of ordinary aneurism of the aorta. The murmur was observed until death in the cases reported. In one instance the diagnosis based on the murmur was not confirmed by palpation findings until after three months had elapsed.

Hospitalstidende, Copenhagen.

Last indexed page 1511.

94 (XLVIII, Nos. 6 7.) *Om intermitterende Halten (dysbasia angiosclerotica, intermittent limping). E. Kirkstein.
95 (Nos. 9 10.) *Behandlingen af Epididymitis tuberculosa. H. Strandgaard.
96 (No. 11.) Apparatus for Test of Color Blindness.—Et Faveblandingsapparat til Undersogelse af farveblinde. A. A. Meisling.

94. **Intermittent Limping.**—Kirstein describes 3 cases of angiosclerotic dysbasia with the Roentgen findings, and reviews the similar affection in horses. The arteriosclerosis was evident in the Roentgen pictures of the foot in his cases. The patients were men of 60 to 68 years of age, and the trouble had been of several years' duration. In the 2 cases described in detail the fact is mentioned that the men were great smokers, one averaging seven strong cigars a day.

95. **Treatment of Tuberculous Epididymitis.**—Strandgaard describes in detail Rovsing's technic as exemplified in 12 cases of tuberculous epididymitis. In 5 the lesion was confined to the genital organs, and in 7 the urinary apparatus was also involved. All the patients in the first group were permanently cured and 1 in the second group. All in the second group were very much relieved by the operation, and in most cases the inevitably fatal outcome was postponed for several months. In case of doubt whether the testicle is sound, he removes the epididymis, but leaves the testicle untouched, and supervises the case further. If the testicle proves to be pathologic it can easily be removed later, but, if not, the patient is spared unnecessary mutilation. He thinks that this is better than making an exploratory incision in the testicle.

Correspondenz-Blatt f. Schweizer Aerzte, Basle.

Last indexed page 915.

97 (XXXIV, No. 24.) Wann soll man bei Appendicitis operieren? H. Haberlin (Zurich).
98 *Relation of Chronic Articular Rheumatism in Children to Tuberculosis.—Chron. Gelenkrheumatismus der Kinder und seine Beziehungen zur Tub. J. Karcher (Basle).
99 (XXXV, No. 1.) Fibromyxom des Wurmfortsatzes (of appendix). E. Monnier.
100 *Zur Therapie der infantilen Bronchopneumonie. T. Zangger.
101 (No. 2.) Kasuistischer Beitrag zur Ureter-Resektion mit konsekutiver Ureterocystanastomose. H. Friolet (von Herff's clinic, Basle).
102 Relations Between Retinal Hemorrhage During Birth and Glioma Later.—Beziehungen der während der Geburt entstehenden Retinalblutungen des Kindes zur Pathogenese des Glioma retinæ. E. Wehli.
103 (No. 3.) Annihilation of Child's Life During Birth.—Die Vernichtung des kindlichen Lebens während der Geburt. Meyer-Wirz.
104 (No. 4.) *Blood Pressure and Measurements.—Ueber Blutdruck und Blutdruckmessung. A. Martin (H. Eichhorst's clinic, Zurich).
105 (No. 5.) Seven Cases of Fish Poisoning.—7 Fälle von Fischvergiftung. A. Stoll (Zurich).
106 (No. 6.) *Ueber Diagnose und Behandlung der Nieren und Blasen-Tuberkulose (of kidneys and bladder). H. Wildbolz (Berne).
107 (No. 7.) *Die therapeutische Bedeutung der Lumbal-Punktion im Kindesalter (in children). L. Tobler (Vierordt's clinic, Zurich). (Commenced in No. 5.)
108 *Zur Pathologie und Therapie der Streptomykosen. F. Schwarzenbach.
109 (Nos. 8-9.) *New Method of Investigating the Chemistry of the Stomach Without the Stomach Tube.—Ueber die Prüfung des Magenchemismus unter natürlichen Verhältnissen und ohne Anwendung der Schlundsonde. Die Desmoid-Reaktion. H. Sahli (Berne).
110 10 Fälle von Herz-Insuffizienz im Militärdienst (heart insufficiency during military service). R. Staehelin.

98. **Relations Between Chronic Rheumatism in Children and Tuberculosis.**—In Karcher's case, the patient was a girl of 12, whose father and several other relatives were tuberculous. She had been healthy until her eighth year, when a primary, chronic polyarthritis of the hands and feet developed. After persisting several years it subsided under general treatment for tuberculosis. No antirheumatic remedies had shown the slightest efficacy. He is convinced that this form of rheumatism in children has a closer connection with tuberculosis than is generally recognized, and advocates treatment on this assumption.

100. **Treatment of Bronchopneumonia in Children.**—Zangger reports 10 cases of bronchopneumonia in children 3 months to 11 years of age in which defervescence was realized in one to four days. He ascribes this favorable result to his method of giving the little patients from one to seven "half baths" of four to seven minutes each, the water at a temperature of from 30 to 28 C., gradually reduced to 26 or 24 C. (86 to 82 F., reduced to 78 or 75 F.). The room must be moderately warm, and the child must be placed in a bath tub with only enough water in it to cover the body, leaving the breast almost uncovered with water. The child is rubbed during the bath, and after two minutes cool water is added to bring the water down to the desired temperature. The child is then rubbed dry with warm towels and put back to bed. These half baths are given night and morning; a little milk is given to the child before and after the bath. The diet should be milk, diluted or not, and cold spring water should be sipped frequently. His experience has been that these baths twice a day raise the blood pressure, strengthen the heart, promote expectoration and soothe the nerves, etc., much better than any other measures.

104. **Blood Pressure and Measurements.**—Martin reviews recent work in this line and lays emphasis on the fact that the pulse curve is no criterion for the blood pressure. The systolic pressure can be determined by application of Gaertner's tonometer or the Riva-Rocci sphygmomanometer with a 10 cm. tube. The latter instrument is more reliable and also allows the diastolic pressure to be determined. Among the more interesting recent work in this line is Federn's research in Vienna. He is convinced that gout, arteriosclerosis, hemorrhoidal conditions and neurasthenia never develop except on the basis of an abnormally high blood pressure. The symptoms of neurasthenia vanish, he asserts, when the blood pressure is reduced to normal. The blood pressure is also high in constitutional syphilis. In icterus and in influenza the blood pressure is very low. His experiences are noteworthy, as they were in a family practice, and he had generally opportunity to know the state of the blood pressure before the development of the illness. On the whole, Martin adds, the fruits of research on the systolic pressure have been very scanty in comparison with the time and labor spent on it.

106. **Tuberculosis of Kidneys and Bladder.**—Wildbolz comments on the difficulty of differentiating tuberculosis of the urinary apparatus. The patients do not feel seriously ill, but complain merely of being a little depressed, easily fatigued and dyspeptic. The only sure sign is a slightly turbid urine. Generally nothing else calls attention to the bladder or kidneys. He describes several cases to illustrate this almost latent symptomatic course of severe tuberculous processes in these organs. Other cases presented the picture of chronic cystitis; the urine should always be examined bacteriologically in such cases. The bladder affection may be due to a primary focus in a kidney, and removal of the latter will cure the secondary process. If restricted to the bladder, the treatment should be purely medical. Operative intervention is altogether discarded now for tuberculous affections of the bladder. The

organ must be rested, and should be treated only with small injections of the desired drug. The best treatment in his experience was injection of 5 to 10 gm. of a 1 to 5,000 or 1 to 3,000 solution of corrosive sublimate in the empty bladder, or the same amount of a 5 per cent. guaiacol oil to which 2 per cent. iodoform had been added. These injections were made at intervals of two or three days, with a sedative in the form of a suppository to relieve the pain and to aid in keeping the bladder quiet. Such treatment systematically kept up for weeks and months will frequently improve to a remarkable extent, or cure entirely, a primary bladder tuberculosis. He has performed nephrectomy in 9 cases and assisted others in 4 cases of unilateral renal tuberculosis, and the results have been eminently satisfactory. The secondary bladder processes always healed soon afterward.

107. Lumbar Puncture in Children.—Tobler reports the various cases in which children were treated by lumbar puncture at Vierordt's clinic. The fluid should be withdrawn slowly and gradually, the patient reclining. The more fluid present the more can be allowed to escape. In 2 cases of hydrocephalus, 400 and 650 gm. of cerebrospinal fluid were drawn, with the best results. In certain cases of meningitis, symptoms developed one or two days after the puncture, demonstrating the excessively sensitive condition of the meninges. The symptoms were relieved by a second puncture. In case of suspicion of a brain tumor, puncture is contraindicated. It proves beneficial in almost all cases presenting symptoms of accumulation of cerebrospinal fluid. Tuberculous and suppurative meningitis, however, do not respond favorably to the punctures. Even slight, transient benefit is scarcely ever obtained. In 16 cases of tuberculous meningitis, in which lumbar puncture was applied 25 times, there was only slight, fleeting improvement in 4 cases, with, in 1, the subsidence of the Cheyne-Stokes respiration. In 2 of the cases the patients died two days after the puncture, and in another it was evidently responsible for the vomiting, trismus and general tremor that followed. In 7 cases of otogenic or postscarlatinal meningitis, the little patients all died, no benefit being apparent from the 10 punctures that had been made. The results of lumbar puncture were far better in 7 cases of epidemic cerebrospinal meningitis. In some instances the benefit was striking, but in others none was apparent. When the first puncture does no good it is useless to repeat it. In some of the cases, with a pressure of from 20 to 60 mm. Hg, the punctures were unmistakably beneficial, while in others, with pressure of from 20 to 30 mm., no results were evident. The particulars of 3 cases in which the punctures were most strikingly beneficial are given in detail. No cure of congenital hydrocephalus is on record, possibly because the punctures have not been systematically repeated long enough. Excellent results were attained in 2 cases of postmeningitic hydrocephalus, and some transient benefit was observed in a case of postmeningitic idiocy.

108. Treatment of Streptomycosis.—Schwarzenbach describes how the germs are inhaled in dust and settle in the crevices in the upper air passages. Prophylaxis should aim to reduce dust and to render the air passages more resistant with prompt and persevering treatment of all catarrhal affections. If the throat is once infected, the toxins from the primary focus spread through the body, and the results are liable to be acute or chronic muscular or articular rheumatism, sciatica, headache, neuralgias, eternally recurring pharyngitis or tonsillitis or streptococcus grippe. If it is impossible to eradicate the infection entirely on account of the ever-recurring new infections, the focus at least can be rendered temporarily harmless and the production of toxins arrested. For this purpose he advises daily rinsing of the throat and nose with isotonic salt solution with subsequent insufflation of some mild antiseptic powder. The mucosa must not be irritated or the treatment will do more harm than good.

109. New Test for Stomach Functions: "The Desmoid Reaction."—Sahli's test is the ingestion of some stain, methylene blue or iodin, enclosed in some substance which passes unaltered through the alimentary canal unless digested by the action of the normal stomach secretions. He accomplishes this by enclosing the stain in a bag of goldbeater's skin. This is merely the uncooked connective tissue from the cecum of cattle. If 1 gm. of iodoform is wrapped in a square of this skin and swallowed, the stomach secretions digest the skin and the stain escapes, with a marked iodin reaction in the saliva or urine in a few hours. Tests with 92 patients amply confirmed the correctness of these assumptions. He has since modified the test, as he found that the goldbeater's skin varied so much in thickness that the tests were not uniform. He now uses a square of the finest rubber dam of the dentists, 2 mm. thick. A piece about 4 cm. square is dusted with talcum powder to prevent its sticking, and a pill containing .05 methylene blue and .1 gm. of iodoform with extract and pulv. licorice āā .04 gm. is placed in the center. The corners of the square are brought together and a very fine and soft catgut is wound three times around the little bag thus made and tied tight with a double knot. The protruding ends of the rubber are then cut off about 3 mm. from the catgut, with care not to snip them off with a single stroke of the scissors, but to cut the rubber in a single thickness to avoid any possible sticking together of the edges of the bag. The pill is heavier than water and sinks to the bottom of the stomach when it is swallowed, which should be after the usual midday meal. The patient is instructed to urinate at 5 and 7 p. m. and again in the morning and to save the urine in separate labeled flasks. The saliva can also be inspected for the iodin reaction. Sahli calls this test the desmoid reaction, from the Greek term desmos, a ligament or connective tissue. In health the urine shows the stain the same evening. The catgut or connective tissue is submitted to the same digestive process as the food in the preceding meal, and the results enable the natural digestive processes under natural conditions to be estimated as by no other test yet devised. He is convinced that the results of this simple and convenient test will supply data for determination of the appropriate diet in certain cases, for the adaptation of the digestive stimuli to the chemical functional capacity of the stomach, and solve various other problems in the physiology and pathology of the stomach, while as a diagnostic measure it has the advantage of being carried out under natural conditions and without any unusual features in regard to diet, etc. A positive reaction always indicates normal digestion, according to his experience. A negative reaction is generally the indication of some gastric disturbance. The little bags can lie in water for twenty-four hours or in pancreatic juice or in a 1 or 2 per cent. solution of hydrochloric acid without any escape of the stain. Nothing but a combination of hydrochloric acid and pepsin digests the catgut and releases the stain in the bag.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

ENLARGEMENT OF THE PROSTATE; Its History, Anatomy, Etiology, Pathology, Clinical Causes, Symptoms, Diagnosis, Prognosis, Treatment, Technic of Operations and After-Treatment. By J. B. Deaver, M. D., Assisted by A. P. C. Ashhurst, M. D. Illustrated with 108 Full-Page Plates and a Colored Frontispiece. Cloth. Pp. 266. Price, $7.00 net. Philadelphia: P. Blakiston's Son & Co. 1905.

TUMORS OF THE CEREBELLUM. By C. K. Mills, M.D., C. H. Frazier, M.D., G. de Schweinitz, M.D., T. H. Weisenburg, M.D., and E. Lodholz, M.D. Cloth. Pp. 179. Reprinted from the *New York Medical Journal.* New York: A. R. Elliott Publishing Co. 1905.

DRINK RESTRICTION (Thirst Cures), Particularly in Obesity. Part VI of Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition. By Prof. Dr. C. von Noorden. Cloth. Pp. 86. Price, 75c. New York: E. B. Treat & Co. 1905.

THE HISTORICAL RELATIONS OF MEDICINE AND SURGERY to the End of the Sixteenth Century. An Address Delivered at the St. Louis Congress in 1904. By T. C. Allbutt, M.A., M.D. Cloth. Pp. 125. Price, $1.00 net. New York: Macmillan & Co. 1905.

A TREATISE ON PLAGUE, Dealing with the Historical, Epidemiological, Clinical, Therapeutic and Preventive Aspects of the Disease. By W. J. Simpson, M.D. Cloth. Pp. 466. Price, $5.00. Cambridge: The University Press. 1905.

A TEXT-BOOK OF MEDICAL PRACTICE for Practitioners and Students. Edited by W. Bain, M.D. With Illustrations. Cloth. Pp. 1011. Price, $7.00 net. New York: Longmans, Green & Co. 1904.

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Original Articles

DIFFERENTIAL DIAGNOSIS BETWEEN COXA VARA AND OTHER STATIC, INFLAMMATORY AND TRAUMATIC AFFECTIONS OF THE HIP JOINT.*

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The surgeon not infrequently meets with cases in which it is extremely difficult and sometimes impossible to make an early and positive differential diagnosis between the different forms of static, inflammatory and traumatic affections of the hip joint. The diagnosis of the different affections of the hip joint has gained much by the use of the Roentgen ray as one of our modern and most reliable diagnostic resources, and in obscure affections of the hip joint it should invariably be resorted to; in the majority of cases the information thus gained will forge the last link in the long chain of diagnostic reasoning by exclusion. Even this diagnostic aid, owing to the complicated structure of the hip joint, its deep location and diversity of function, will fail in some cases in clearing up the existing doubt. As an isolated diagnostic aid, it will not infrequently lead the surgeon astray in his search for a correct diagnosis. A careful, painstaking clinical study of the case from all aspects, anatomic, physiologic, mechanical, etiologic, and pathologic, must precede the use of the Roentgen ray, which should only be employed as a diagnostic resource in verifying or correcting the clinical diagnosis. Among the newest, most obscure and least understood deformities of the hip joint is an affection of the femoral neck which manifests itself clinically and pathologically by softening, bending and torsion known and described as coxa vara.

This strange joint disease has not received from the American surgeons the attention its clinical importance merits. Few outside of Germany have made it the subject of special investigation. For a long time pathologists and surgeons have been aware of the existence of a strange deformity of the femoral neck which by mechanical causes seriously interfered with the use of the affected limb and for which they could give no satisfactory explanation. Specimens of this kind can be found in some of the old pathologic museums where they were stored away years ago awaiting a satisfactory interpretation of their pathologic significance. Orthopedic operations were repeatedly performed for the purpose of improving function in cases which are now known to have been instances of coxa vara. It was not, however, until 1888 that coxa vara was made the subject of an earnest clinical study by E. Müller, who proved by his careful observations that it was a disease of the neck of the femur entirely different from any of the then known diseases of the proximal end of that bone. Six years later, and almost simultaneously, Hofmeister and Kocher made valuable contributions to the pathology and clinical history of this disease. Before a true conception of the clinical features of coxa vara was formulated by these pioneers in this part of the surgery of the hip joint, this disease was confounded with the inflammatory affections of the proximal end of the femur, and was diagnosticated and treated as coxitis. A genuine coxa vara is characterized by a non-inflammatory softening of the neck of the femur, accompanied or followed by a downward bending and torsion.

As a knowledge of this disease became more general, it soon became apparent that other affections of the neck of the femur were included under the term coxa vara. Kredel was the first to call attention to the congenital form of the disease and reported two cases that came under his own observation. Similar cases were observed later by Mouchet, Aubion, Schede and Kirmisson. Kirmisson is of the opinion that the congenital form is caused by harmful intrauterine pressure. Distortion of the neck of the femur simulating coxa vara has also been observed in cases of congenital dislocation of the hip joint, more especially in long-standing cases. Wagner describes a case of this kind from Hoffa's clinic. It has also been seen in osteomalacia, and Hofmeister and Alsberg have each reported such a case. Rachitis is likewise frequently mentioned as a cause of coxa vara, and such cases are spoken of as coxa vara rachitica. Lauenstein found in a rachitic skeleton the angle of the femoral neck on one side diminished, and on the other increased. Hoffa states that coxa vara rachitica is not of very rare occurrence, while Charpentier, who examined many rachitic skeletons, did not find a single specimen in which the neck of the femur was in a horizontal position. Nearly all authors agree in admitting that all inflammatory affections, chronic and acute, tubercular and suppurative, may give rise to distortion of the neck of the femur simulating coxa vara, and cases in support of this opinion have been described and reported by Volkmann, Schede, Stahl, Oberst, Bruns, and others.

Arthritis deformans has much in common with the deformity of the neck of the femur, caused by coxa vara, and Kirmisson and Charpentier regard the two conditions as identical. In two cases of coxa vara operated on by Maydl, the specimens presented the gross pathologic changes typical of arthritis deformans. A form of traumatic coxa vara has been described in connection with a trauma resulting in epiphyseolysis and fracture of the femoral neck. Several of the authors who have contributed most toward elucidating the pathology of coxa vara, among them Kocher, Alsberg and Sudeck, insist that separation of the head of the femur from the neck in persons below the age of puberty can take place in consequence of very slight application of force, and that the displacement of the head and the subsequent manner of repair will give rise to a deformity which corresponds with the clinical phenomena of coxa vara. De Quervain reports a case of fracture of the neck of the femur operated on by Kocher in which such a condition was found. Two similar cases have been reported by Sudeck and Alsberg. From the foregoing, it becomes apparent that even at the present time much confusion exists in reference to the limitation of the term coxa vara from an etiologic, as well as from a pathologic, standpoint. That there is such a thing as a non-inflammatory, non-traumatic softening of the neck of the femur in young subjects, followed or attended by deformation, there can be no further doubt, and it seems to me that the term *coxa vara* should be limited to such cases, or at least this form should be called coxa vara *vera,* in contradistinction to the somewhat similar deformation produced by traumatic and inflammatory causes; in other words, deformations of the femoral neck should be classified on an etiologic basis, the only firm and sound foundation for a rational nomenclature of this as well as of any other disease.

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* Presented in abstract to the Pan-American Medical Congress, Panama, January, 1905.

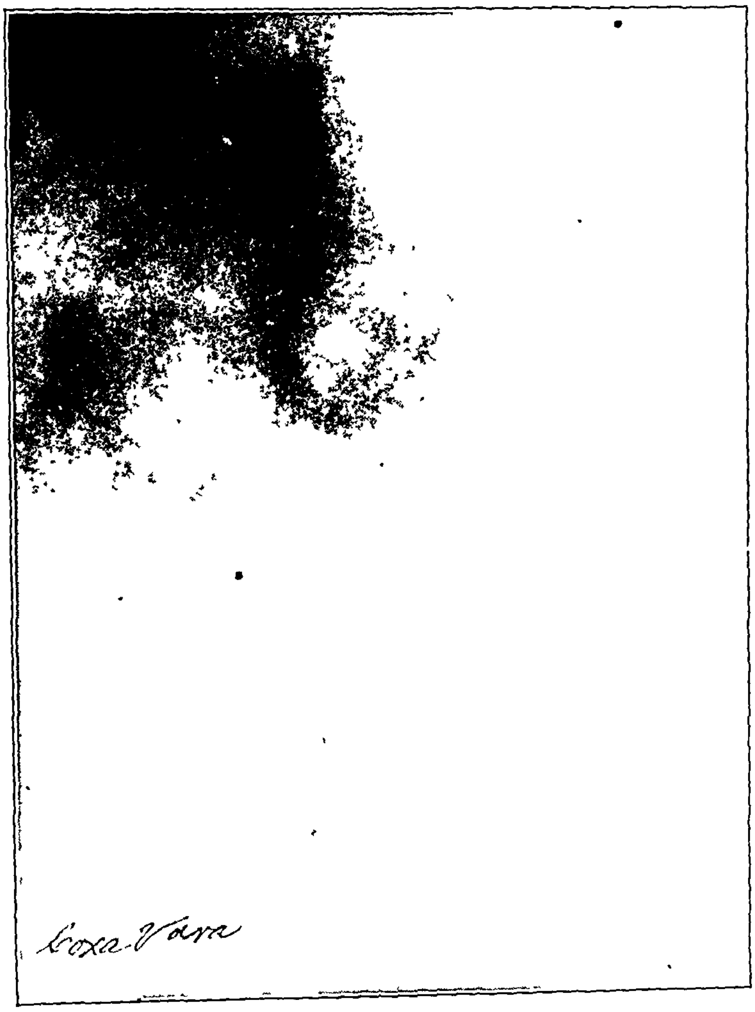

Fig. 1.—Bending downward of the neck of the femur with elongation and flattening of the head.

I have had an opportunity to examine in my practice three cases of coxa vara; two in my clinic in Rush Medical College, and one in private. I have undoubtedly had my share of cases that I did not recognize before this disease was known, and I have done what others have done before that time, diagnosticated and treated them as cases of tubercular coxitis. These cases did not suppurate and the patients eventually recovered with good functional result. The two clinical cases mentioned presented the usual evidences of this disease. Both patients were young men between sixteen and eighteen years of age. Rest and the internal administration of phosphorus in minute doses constituted the treatment. In one of these cases the acute stage lasted over a year. I made use of phosphorus under the belief that the softening of the bone was the result of a late localized rachitic process, and that this drug might possibly have the same salutary effect as in the general infantile form of the disease. The third case is of more than ordinary interest, owing to the advanced age of the patient. In forty cases of coxa vara collected by Hofmeister and Frazier, the oldest patient was twenty-one, and all authors place stress on the well known fact that this disease is met with only in children and in adolescents, and in Frazier's table it will be seen that by far the largest number of cases were between fourteen and eighteen years of age. In all probability a doubt will be raised in the minds of many concerning the correctness of the diagnosis in this case, and it will be alleged that the deformity of the neck and head of the femur was caused either by fracture or by senile arthritis. A careful study of the clinical history and inspection of the photographs and Roentgen photogram (Fig. 1) will exclude the possibility of a mistaken diagnosis.

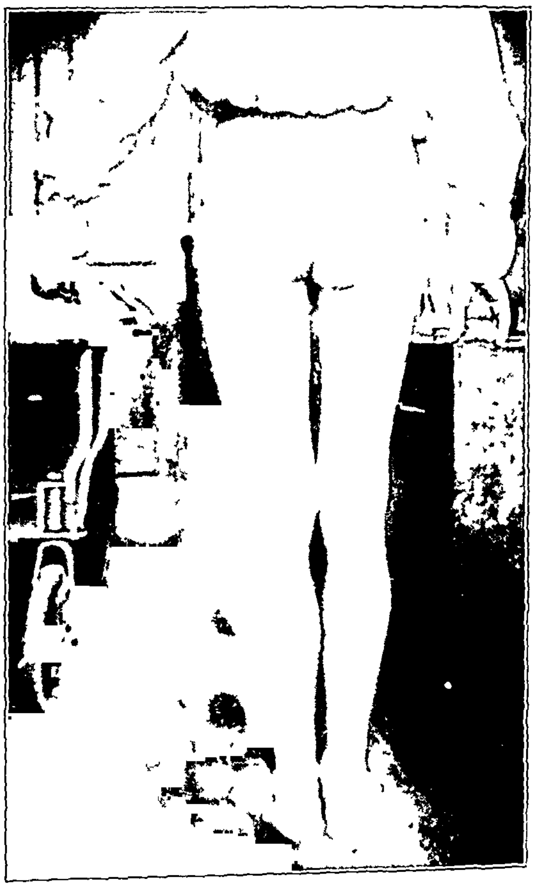

Fig. 2—Right trochanter major abnormally prominent. Gluteal crease two inches lower on right side.

Patient.—A man, aged 42, belongs to a long-lived family, and is free from any hereditary taint.

History.—He is a native of this country and was engaged in literary work. He is married, but childless. He is five feet nine inches in height and weighs 129 pounds. With the exception of a moderate use of alcohol and tobacco, his habits are faultless. He has passed through the ordinary diseases of childhood, with the exception of diphtheria. He gives no history of typhoid fever or pneumonia; on the contrary, his general health has been excellent. At the age of 27 he contracted syphilis, followed by mucous patches and characteristic cutaneous eruption.

Present Illness.—Three years ago he experienced a dull aching pain in the right hip joint, alternating with lancinating pains extending along the anterior surface of the thigh as far as the knee. The pain came on in paroxysms which would last for about two weeks, followed by painless intervals of several days' duration. There was no tenderness and no impairment of joint motion; the pain was not aggravated by standing or walking. Last February he was suffering from one of these painful attacks and had become slightly dizzy; when in the act of carrying two coal scuttles filled with ashes he slipped on the ice and fell with full weight squarely on the buttocks. He immediately regained his feet and finished his task without any apparent ill effects from the fall, and repeated the same work. When he reached home, soon thereafter, he perspired freely, and when he sat down to table he felt "stiff" all over. Next day, about noon, he experienced severe pain in the affected hip joint on walking, and went home in a cab, and the same evening he had to resort to the help of a cane to enable him to walk. Osteopathic treatment seemed to improve his condition. Ten days later, in ascending the stairs, he slipped and fell lightly on hands and knees, and then rolled on the right side, but experienced no immediate untoward symptoms, and climbed the stairs, but on reaching the top the pain in the hip became more severe and he could not stand without some support. The next morning, on leaving his bed, the pain remained quite severe, and was aggravated by flexion and rotation of the thigh. The lameness increased, and a week later the patient became aware that the affected limb was shorter. He has never been confined to bed, and at the time he consulted me, last fall, he walked with a decided limp, but without the aid of any mechanical support. General health of patient is good.

Examination.—There is flat-foot on both sides. The right limb, especially the gluteal region, is markedly atrophic. The trochanter major is abnormally prominent; the gluteal crease is two inches lower than on the left side (Fig. 2). Comparative measurements revealed a shortening of an inch and a half, and the great trochanter is displaced the same distance above the Roser-Nélaton line. At the base of Scarpa's triangle a slight prominence can be felt. The right limb is slightly rotated outward; there is no adduction of thigh. Standing on the left limb, the patient can execute all movements of the thigh freely, without pain, and in all directions, except full abduction. There is no tenderness and no pain. The paroxysmal attacks of pain subsided months ago, and the function of the limb has been improving slowly but steadily. He walks with a decided limp and all he complains of is a muscular weakness and functional defects which will yield to a considerable extent to restoration of the equilibrium of the body by increasing the thickness of the sole of the shoe on the affected side, to make up for the degree of actual shortening, electricity and massage.

Remarks.—The Roentgen picture illustrates the bending downward of the neck of the femur to a horizontal level, elongation and flattening of the head of the femur (Fig. 1). It is not likely that either injuries resulted in an infraction, much less a complete fracture, but there can be no question that they resulted in each instance in an aggravation of the pre-existing local difficulty. The spontaneous recovery, as well as the degree of bending downward of the neck of the femur in its entire length and the complete absence of neoplastic inflammatory products, exclude absolutely the possibility of arthritis deformans or senile coxitis. The clinical history as well as the intra-articular conditions revealed by the *x*-ray could not possibly give rise to a suspicion of tubercular coxitis. The posterior bending of the femoral neck in this case was slight, consequently little backward displacement of the great trochanter; hence the comparatively good remote functional result. If this is a case of coxa vara *vera*, as I believe it to be, it would prove that this disease is not limited to the bone-growing period of life, and that it may, at least in rare cases, attack the adult.

ETIOLOGY.

Very little is known concerning the true nature of coxa vara. The authors admit that the softening of the neck of the femur is the most important element which gives rise to the subsequent deformity which is largely due to the superimposed weight of the body. Kocher and Langhans claim that the softening is caused by a localized juvenile osteomalacia. Others regard it as a late form of local rachitis.

Küster reports a case in which he attributed the characteristic distortion to ostitis fibrosa. Whitman and Sudeck believe that the yielding of the femoral neck can take place without previous softening of the bone by gradual changes in the architectural disposition of the supporting and traction arches in the bone under the weight of the body. Kocher, König, and several other authors consider coxa vara mainly in the light of an occupation disease in the same sense and due to similar causes as genu valgum and flat-foot. Kocher has seen it most frequently in young males whose occupation necessitated prolonged standing position with legs abducted, as is the case with cheese makers and some agricultural pursuits. There are, however, many cases on record in which no such direct static cause could be made responsible for the deformity. Jaboulay has gone so far in comparing coxa vara with flat-foot as to call it simply *"hanche bot,"* and insists that it may be either of congenital origin or acquired-static form. He called attention to this affection of the neck of the femur as early as 1890.

Sprengel reported two cases in 1898, in whom resection of the hip joint was made, and both specimens showed a loosening of the head of the femur in the epiphyseal line, the result of a slight trauma. The displacement of the head and the subsequent union in malposition gave rise to the characteristic deformity, and he is therefore inclined to attribute to trauma the most important etiologic rôle. A number of similar cases have been reported since, and not a few surgeons are under the belief that trauma is the most important element in the causation of this disease. Charpentier and Kirmisson claim that coxa vara is nothing more nor less than a form of arthritis deformans coxæ.

Hoffa recognizes different causes which may affect the resisting power of the neck of the femur, which when so affected yields under the weight of the body, and results in diminution of its angle and sometimes in torsion; the former are the predisposing, the static influence the exciting, cause.

PATHOLOGY.

The gross pathology of coxa vara is well understood and consists in a bending downward of the neck of the femur until it reaches a horizontal line, combined in most cases with a posterior curve, and in rare instances with an anterior curve, these secondary curves causing outward or inward rotation of the axis of the femur. The textural changes are limited to the neck of the femur, the acetabulum and the soft structures of the hip joint remain intact throughout the entire course of the disease. There is no effusion in the affected joint, and no tissue changes in or around the joint indicative of inflammation. The general and local symptoms exclude the existence of any kind of infection and the bone lesion, whatever it may be, is of a degenerative and not of an inflammatory type. Under the weight of the body, the softened neck of the femur bends downward, and muscular action and ligamentous traction are responsible for the torsion, which varies greatly in kind and degree. The primary bone affection appears to be of a self-limited character, as a spontaneous recovery is the rule. The duration of the active stage may terminate in a few months, and it may be protracted for years. Very little is known regarding the minute morbid anatomy of the primary bone affection which precedes and accompanies the deformation of the femoral neck. As the disease is a self-limited one, few, if any, postmortem examinations have been made so far.

The study of the histology of the bone lesion has been restricted to the examination of specimens obtained by resection (Müller, Kocher, Hoffa, Nasse, Maydl). Frazier gives an account of 16 such specimens from different sources, in which, on examination, three presented rachitic changes, six practically normal bone structure, two arthritis deformans, and the remaining specimens juvenile osteomalacia. It appears that in the cases collected by the same author and comprising Hofmeister's table, only in 12.5 per cent. could the disease be associated with rachitis, and only in 10 per cent. were genu valgum or pes planum, one or both, coexisting affections.

Haedke made a histologic examination of a specimen of coxa vara obtained by resection from a patient seventeen years old. He found a condition similar to rachitis both macroscopically and microscopically. He came to the conclusion that coxa vara may develop at the age of puberty consequent on the so-called late rachitis, although the "juvenile osteomalacia" of Kocher is probably the explanation of the greater number of cases. In Lauenstein's case, there were indications of marked rachitic deformities in many of the long bones. Osteomalacia is a disease that affects, with few exceptions, child-bearing women; rachitis, on the other hand, is a much more common disease and affects children of both sexes alike, consequently it is much more reasonable to assume that the softening of the bone is more likely to be caused by a late localized rachitic process than by osteomalacia. Two other explanations deserve consideration.

As coxa vara is largely, if not exclusively, a disease of the bone-growing period, we might suspect, from a histologic standpoint, either the existence of imperfect ossification caused by a defect in the number or power of histogenesis of the osteoblasts, or possibly an excess of osteoblasts. Again, as the disease is clinically characterized during the acute stage by neuralgic lancinating pains, it is possible that the defective resisting power of the neck of the femur and the osteoporosis might be the consequence of a trophoneurotic affection. In eliminating the affections of the hip joint which clinically mimic very closely coxa vara *vera*, it is very evident that much has to be accomplished in the future to clear up the true etiology, and correct pathology of this strange disease.

SYMPTOMS.

The first symptom complained of by the coxa vara patients is a pain in the hip joint which usually radiates from the joint along the anterior and inner aspects of the thigh as far as the knee. In some cases the function of the joint is seriously impaired almost from the beginning, more especially in the more acute form of the disease; in other instances it is only slightly affected. In severe cases the patients are sufficiently ill to be confined to bed, but ordinarily they are well enough to be about, although quite lame. Temperature and other constitutional disturbances, as well as tenderness about the affected joint, are absent. Patients thus affected are usually under the belief that they are suffering from rheumatism, and when they consult a physician during the early stage of the disease, a diagnosis either of rheumatism or of neuralgia is usually made and treatment directed accordingly. In the course of a few weeks or months the acute symptoms subside, and a decided improvement is noticeable, so much so that the patient resumes his occupation with or without stiffness of the joint. The general health of the patient is not deteriorated to any extent by the disease. Examination of a patient the subject of well-advanced coxa vara reveals apparent and real shortening of the affected limb, the former due to a faulty position of the pelvis, the latter corresponding with the diminution of the degree of obliquity of the femoral neck caused by its downward bending. The normal angle of the femoral neck in the adult, as determined by Mikulicz, is from 125 degrees to 126 degrees, and according to Lauenstein from 126 degrees to 129 degrees. In far-advanced cases of coxa vara the angle is often reduced to 60 degrees. The real shortening varies from an inch to an inch and a half. The affected limb will be found adducted, and in the majority of cases rotated outward. The adduction of the limb is caused by the diminution of the angle of the neck of the femur and the outward rotation by the posterior secondary flexion or torsion of the neck. The downward bending of the neck of the femur is the most conspicuous anatomic feature of the disease, being invariably present to a greater or lesser degree. The posterior curve or torsion is less constantly present, and varies more in degree. In exceptional cases, the neck of the femur bends in the opposite, anterior direction, in which event the femur is rotated inward instead of outward. Such cases have been described and reported by Zehnder, Ghillini, Nasse and Hofmeister. The trochanter on the affected side is abnormally prominent, displaced backward and above the Roser-Nélaton line to the extent corresponding with the degree of actual shortening. The gluteal region is flattened, the gluteal fold lowered, and a deep groove will be found between the trochanter and the gluteal muscles. Ogston, who operated on five cases of coxa vara in young children, the oldest only fourteen years, claims that muscular atrophy is absent, and that the gluteal fold is not affected. In grave cases, the base of Scarpa's triangle is prominent, and a hard swelling can be felt corresponding with the convexity of the posterior curve of the neck. If inward rotation should be present, no such prominence can be felt but instead of it, probably, a shallow depression corresponding with the concavity of the anterior

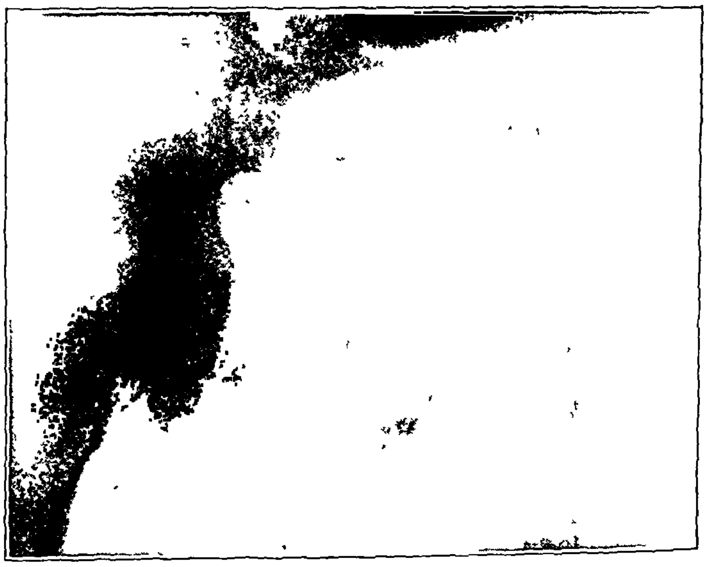
Fig. 3.—Destructive process involving neck of femur.

curve. Aside from the mechanical obstacles due to the distortion of the neck of the femur, joint motion is free and painless. Abduction and inward rotation are the two movements most interfered with by the deformed neck. Unilateral coxa vara leads to static scoliosis, and, if the disease involves both hip joints, a lordosis develops, as in cases of double congenital dislocation of the hip joint, and the patient assumes the same waddling gait. Hands and feet are frequently livid, a condition often observed by Mikulicz in cases of genu valgum in the adult.

DIAGNOSIS.

If an adolescent consults a physician complaining of lameness, pain in the hip radiating in the direction of the knee joint, and on examination the femur is found adducted and rotated outward, the suspicion of coxa vara is well founded, as a similar position of the limb is only observed in fracture of the neck of the femur. If such abnormalities in the position of the limb in young subjects take place in a comparatively short time, coxa vara must be suspected, and a most thorough examination should be made with the patient in both the standing and recumbent positions. If this is done mistakes in diagnosis will be avoided, more especially in differentiating between this disease and the early stages of tubercular coxitis. Coxa vara never gives rise to abscess formation, while this is of frequent occurrence in tubercular coxitis. The onset of coxa vara is more abrupt and acute than what is observed in the majority of cases of tuberculosis of the hip joint. It is a self-limited disease, and sooner or later a spontaneous cessation of the acute symptoms may be confidently expected, while the opposite clinical tendencies characterize tubercular coxitis. Tuberculosis of the hip joint, like tubercular processes in other parts and organs of the body, is generally attended at least by a slight rise in the evening temperature, while the temperature in coxa vara remains normal. Tubercular coxitis in the great majority of cases is a disease of childhood, and begins in the larger proportion of instances as a primary osteal affection in the proximal end of the femur. Its onset is insidious. The pain is referred to the inflamed joint, and radiating in the course of the obturator nerve to the inner condyle of the femur. During the early stage of the disease the thigh is slightly flexed, abducted and rotated outward. Nocturnal muscular twitching is almost a constant symptom; this is something which is never found in coxa vara. In tubercular coxitis, muscular rigidity fixes the joint at an early stage and all movements are productive of pain, and light blows against the condyles invariably aggravate the pain. Tenderness, such a marked clinical feature in tubercular and other inflammatory affections of the hip joint, is never found in coxa vara. Shortening and outward rotation of the limb belong to the latter stages of tubercular coxitis, while in coxa vara they may even precede the painful or acute stage of the disease, and the shortening is always one of its early manifestations combined usually with outward, and, in exceptional cases, with inward rotation of the limb. As a final diagnostic test in doubtful cases, the employment of the Roentgen ray will enable us to differentiate between the two affections (Fig. 3). In coxa vara, the downward bending of the femoral neck is almost characteristic, while in tubercular coxitis the *x*-ray picture will show the existence of a destructive process involving the proximal end of the femur, frequently complicated by coexisting or consecutive disease of the acetabulum.

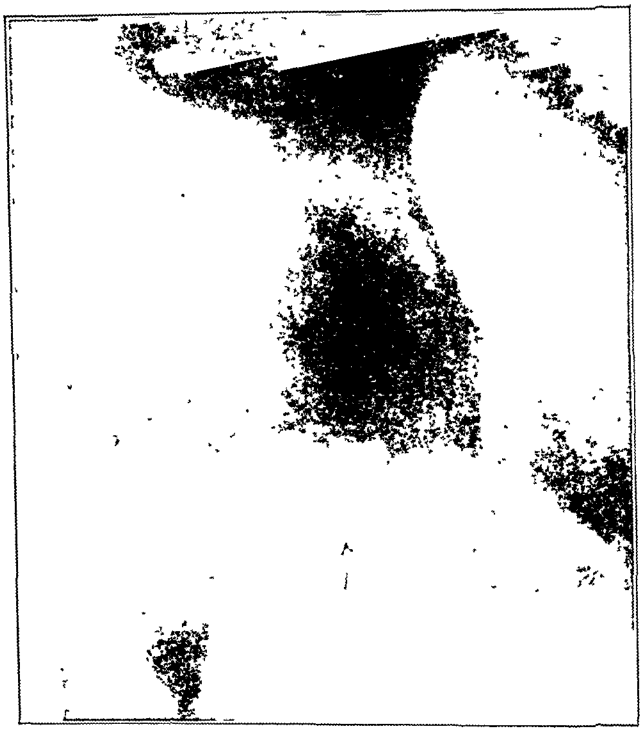

Fig 4.—Inflammatory deposits involving femoral neck, especially its base

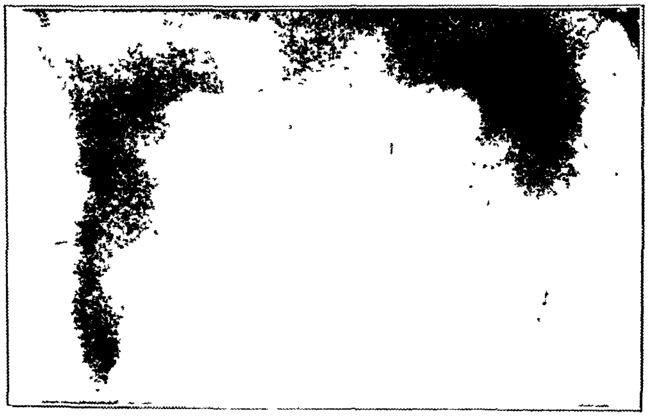

Fig 5.—Perfect bony union of impacted fracture of the neck of the femur.

Bilateral coxa vara is of more frequent occurrence than bilateral tuberculosis in the relative proportion with which these two diseases are encountered in practice. Muscular atrophy is more marked in tubercular coxitis than in coxa vara. The differential diagnosis between coxa vara and arthritis deformans, called senile coxitis, where it affects the hip joint, presents fewer difficulties. Coxitis senilis is a disease of advanced life.

Old age is a relative term in this as well as in many other connections. Some men are old at forty years, others remain young in body and mind at the age of the Psalmist's limit of life. Cases of senile coxitis are met with in persons less than forty-five years of age. It may be claimed that the case which I report in this paper is one that should be classed under the head of senile coxitis. There is only one condition in the radiographic illustration of this case that might excite doubt, and that is the elongation and flattening of the head of the femur. This condition, however, is not incompatible with my diagnosis as we may safely assume that the same causes which softened the neck of the femur sufficiently to yield to the weight of the body may have extended to the head, rendering it liable to undergo alterations in shape under the influence of the same mechanical or static causes. On the other hand, this picture is entirely negative concerning the constant pathologic conditions found in senile coxitis, viz., neoplastic inflammatory deposits involving the femoral neck, especially its base, the acetabulum in the form of a new bony deposit, which finally result in a complete ankylosis (Fig. 4).

In senile coxitis the angle of the neck of the femur is not diminished. Arthritis deformans is not infrequently a polyarticular disease, while coxa vara is an affection which is only met with in the hip joint. In senile coxitis, the head of the femur becomes occasionally elongated, but during the later stages the upper surface is deprived of its cartilaginous covering, and the exposed underlying bone becomes hardened and is polished by the limited movements of the joint. In the case reported, such changes have not taken place, most of the movements of the joint have been rather increased than otherwise since the cessation of the acute symptoms. There is no pain, no cracking or roughness elicited by joint motion as in well advanced cases of senile coxitis. The shortening of the limb in senile coxitis is not caused by bending downward of the neck of the femur, but by loss of tissue of the head of the femur and the upper segment of the acetabulum.

It should not be difficult to differentiate between coxa vara and traumatic or pathologic epiphyseolysis. These are injuries and affections recognizable by a careful study of the clinical history and by a thorough examination. The only exception I know of that might lead to a wrong diagnosis is a fracture of the neck of the femur without complete functional loss of the limb, an instance of which came under my observation in the surgical clinic of Rush Medical College last winter.

Patient.—A tall, spare man, aged 65, suffered a fracture of the neck of the femur eight months before he sought the service of my clinic.

History.—The fracture was the result of a fall on the great trochanter and the injury was diagnosticated as a contusion. After the first day, the patient left his bed, and with the aid of crutches, used only for several weeks, has been on his feet ever since. He walks now with a decided limp, but without the aid of mechanical support.

Examination.—I found all the indications of an impacted intracapsular fracture of the neck of the femur which had united by bony union, an inch and a half of shortening, and outward rotation of the limb. The accompanying radiograph corroborates the correctness of the clinical diagnosis. Bony union of the impacted fracture is perfect (Fig. 5). The neck of the femur is shortened, but there is no diminution of its angle.

The Roentgen ray should be relied on in doubtful cases in confirming or correcting the clinical diagnosis. The Roentgen photogram should be taken from behind with the patient in the ventral position, and the tube 24 inches above the surface of the body. (Hofmeister.) In applying this, the most reliable and important diagnostic test, Kirmisson had to change his diagnosis four times in 7 cases, while in Hofmeister's 15 cases it confirmed the clinical diagnosis in all but one.

PROGNOSIS.

Coxa vara never becomes a direct source of danger to life. Left to itself and under the influence of conservative expectant treatment, it pursues the course of self-limited diseases and sooner or later ends in spontaneous recovery. The impairment of the functional result depends on the degree of deformation of the femoral neck. Some cases terminate in almost complete restoration of joint function, in others the extent of bending and torsion of the neck of the femur is such that permanent lameness and great impairment of joint function are the inevitable results. After cessation of the acute symptoms, the use of the limb often improves quite rapidly, just as after a fracture with vicious union, owing to the architectural changes for the better in the deformed neck which nature effects.

Hofmeister gives the ultimate functional results in 32 cases. All the patients recovered sufficiently to return to their former occupations, which certainly reminds us not to resort to operative measures prematurely, as undoubtedly has been done in some cases in the past. As in inflammatory flat-foot, the pain gradually disappears, after which a process of partial or complete restoration of function is initiated.

TREATMENT.

The general treatment in coxa vara is unimportant, if not useless. The subjects of this disease usually enjoy fair, if not perfect, health. It is a local affection, limited, so far as we know, to the neck of the femur, and the exact nature of which so far is unknown. As a number of weighty authorities are of the opinion that this local affection is a late manifestation of rachitis, the internal administration of minute doses of phosphorus would be theoretically indicated. I made use of this anti-rachitic drug in two of my cases with what I believed to have been a good effect, but they might have been comparatively mild cases, and the speedy and satisfactory recovery might have taken place without such medication. In patients infected with hereditary or acquired syphilis, the internal use of potassic iodid should not be neglected. The local treatment must have for its objects the relief of pain and the limitation, as far as possible, of the bending and torsion of the neck of the femur. Both of these indications are met by securing for the affected joint absolute rest. Rest in bed, combined with extension by weight and pulley, should be enforced as soon as a correct diagnosis is made. Bauer reports three cases from the Serafim Hospital, Stockholm; the patients, aged respectively 17, 17 and 16, were cured by baths and massage, in one case combined with extension continued for four weeks. Rest in the dorsal recumbent position combined with extension answers the indications more perfectly than any orthopedic appliances, and should be continued until the acute symptoms have disappeared. After the pain has ceased, the patient should make use of crutches for a number of weeks, and during this time the sole of the shoe on the opposite side should be raised at least an inch in order to secure auto-extension of the limb on the affected side. In the vast majority of cases, this simple expectant treatment will suffice in shortening the acute stage, and in preventing a maximum degree of deformity.

Until the active symptoms are fully under control, operative treatment is absolutely contraindicated. After the acute stage has subsided, baths, massage and electricity will be found useful in developing the atrophied muscles, and in increasing the range of joint motion. At this stage forced motion under narcosis may improve the functional result. The great improvement in the use of the limb, which is so often observed to take place spontaneously, is probably the result of a gradual modeling of the deformed neck into a more normal shape. The surgeon should postpone all operative measures until he can satisfy himself that conservative treatment and nature's efforts have fallen short in restoring the usefulness of the limb. When this has been shown to be the case, various operative procedures suggest themselves. No one operation can meet the mechanical obstacles in different cases. Before any operation is planned, Roentgen photograms should be taken, showing the anterior and posterior aspects of the joint, as the conditions thus revealed will aid the surgeon in the selection of the operation suited to the case. Zehnder and Vulpius made use of section of the adductor muscles combined with *brisement forcé*, a method of treatment which at best has but a limited range of application. Kraske and Budinger advised the excision of a wedge-shaped piece of bone in the anterior convex side of the neck (*Keilosteotomie*) for the purpose of correcting the extreme outward rotation of the limb. Koenig condemns this operation, unless it can be made extracapsular, which is not often the case. Several disastrous results have followed this operation. Linear straight subtrochanteric osteotomy (Hofmeister) and oblique subtrochanteric osteotomy (Hoffa) have been practiced with success in a number of cases. Watson-Cheyne reports two cases, children six and a half and three years old, in whom he made a subtrochanteric osteotomy to correct the outward rotation. In one case Kocher made a subtrochanteric resection with a satisfactory result. De Forest Willard obtained a good result in an aggragated case by making a transverse intertrochanteric linear osteotomy. In very grave cases of deformity following this disease resection of the joint is favored by Hoffa and by Sprengel. In one of Hoffa's cases, the shortening of the limb was reduced from seven to three inches by this operation.

CHORIOEPITHELIOMA MALIGNUM.

WITH REPORT OF A CASE.*

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PHILADELPHIA.

I recently secured, in the service of Professor Montgomery, in his gynecologic clinic in the Jefferson Medical College Hospital, a tumor of the uterus which is comparatively new, of decided pathologic and clinical interest and worthy of permanent record.

Patient.—R. M., female, white, married, aged 31.

Family History.—One brother died of pulmonary tuberculosis and one maternal aunt of cancer of the uterus.

History.—The patient suffered all the diseases of early childhood; otherwise she had comparatively good health. She menstruated first in her eighteenth year, and the periods were always regular and somewhat painful. She was married at 18 and has had five labors. The first four were normal, but the fifth occurred at the eighth month and was hastened or produced, she states, by sustaining a rather severe fall. The last child died in six weeks.

Present Illness.—This began about six months before the admission to the hospital and four months after delivery. There was more or less vague and indefinite pain, of a dull, aching, boring character, in the lower portion of the abdomen. She suffered constant and increasing distress in the back and head. Two months prior to admission she suffered from rather a free serous and offensive vaginal discharge. During the past six weeks the discharge has greatly increased in quantity and occasionally is mixed with blood. The bleeding is also progressively increasing. The patient is extremely pale and anemic and has lost, she says, considerable flesh. She complains of extreme weakness and is easily fatigued. The urine report is negative.

Examination.—On bimanual examination the cervix is found to be large and soft. The external os and the cervical canal are open and admit the tip of the index finger. The uterus is apparently 2½ times its normal size, of about normal consistence and freely movable. The extrauterine tissues are palpably free from disease. A rather hard, circumscribed prominence was discovered in the right groin immediately below Poupart's ligament.

Operation.—May 19, 1904, Prof. E. E. Montgomery operated. The patient was prepared for combined operation, and before opening the abdomen the cervix was completely dilated and the interior of the uterus explored. A small amount of material was removed, and this so resembled malignant tissue that hysterectomy was decided on and was performed. The abdominal route was selected.

Pathology.—The uterus was 2½ or 3 times its normal size and of normal consistence. The enlargement was general and uniform, though nodulations could be defined in its interior. The uterine wall on incision was found to be thickened and showed the general changes found in chronic metritis. The tissue cut with normal resistance. On exposing the interior of the organ a large, irregular, nodular mass was found occupying the posterior and fundal wall. This was of a greenish "blood-coagula" color and of rather tense consistence. The nodules varied in size from a pea to a man's thumb and were spread completely over the posterior wall. The mass did not show any line of demarcation between itself and the uterus, but apparently infiltrated the uterine wall to the extent of three-eighths of an inch. The mucosa surrounding the tumor was markedly hypertrophied. The tubes and ovaries did not show any pathologic alteration. The ovarian vein of the right side was distended by an organizing thrombus and a portion of this was protruding from the vessel after removal, as is shown in the accompanying drawing (Fig. 1).

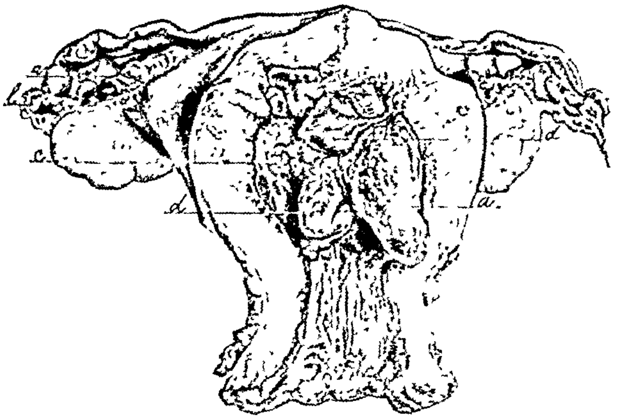

Fig. 1.—Drawing of gross specimen. a, Ovarian vein distended with organizing thrombus. Portion of thrombus protruding from the vessel. b, Round ligament. c, Tumor infiltrating mucosa and muscular wall. d, d, d, Three large nodules forming major portion of growth.

Pathologic Histology.—On microscopic examination of stained sections of the growth several elements were found. The presence of chorionic villi in certain areas of the sections was decidedly marked, and a striking characteristic of these was the phenomenal, active disturbance of their cellular layers. In most of the villi the proliferation was most pronounced in the Langhan's cells (Figs. 2 and 3), and in many places these could be seen in several layers about the villi and apparently wandering in the acid-staining substance surrounding them. The cells varied in size, but all were moderately large and contained oval, well-defined, deeply-staining nuclei. In some of the cells active nuclear division was observed (Fig. 2).

The substance surrounding the villi stained deeply with the acid stains and resembled bands of fibrils and whorls of protoplasm. In many areas large, pale nuclei were found, and in the others pronounced vacuolization was observed. These protoplasmic masses were occasionally broken by spaces which were possibly blood channels, as many of them were filled with blood cells. In portions of the sections, collections of very large, oval and round cells were seen. These cells were invariably congregated in masses and, as a rule, were found on the borderline of the blood channels. They were, as I have stated, extremely large and contained rather large, oval and prominent nuclei. Their protoplasm, as a rule, was pale, and in many instances very ill defined. These cells had the general appearance of the decidual cells. In some areas of the tumor leucocytic infiltration was observed, though not to a great degree (Fig. 3).

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* From the laboratories of the Jefferson Medical College Hospital.

Subsequent History.—The patient was living and well eight months after the operation, without any subjective manifestations of recurrence of the disease.

GENEALOGY OF CHORIOEPITHELIOMA.

This tumor had been diagnosed clinically as carcinoma of the corpus uteri, but on further investigation, particularly with the microscope, its true character was determined. The different terms applied to this comparatively rare condition of the uterine body are deciduoma malignum, malignant bladder mole, sarcoma deciduo cellulare, malignant placental polyp, and numerous other rather indefinite terms. These names were applied to this growth in its early history, because it was thought in the earlier microscopic study of the growths that they were of decidual or maternal origin and belonged to the sarcoma family. The first important paper describing these tumors was contributed by Sänger[1] in 1889. At this time he described a case of malignant tumor of the corpus uteri possessing a sarcoma-like structure which followed an abortion at the eighth week. Sänger described this as a tumor belonging to the sarcoma family, developing from the decidua and, therefore, he applied the term deciduoma malignum. Sänger[2] later collected all analogous cases from the literature, 11 in number, and these, with his own case, made 12. A paper describing these cases was published in 1893. Among the cases collected by Sänger were 4 from the laboratory of Professor Chiari,[3] who in 1887 described 3 of these growths, pronouncing them cases of uterine cancer complicating pregnancy. Gottschalk,[4] in his contribution on the subject, possibly came nearer hitting the true character of these tumors as taught to-day. He described a case in which chorionic villi were present, and he found that there was quite marked cellular disturbance in the stroma of the villi and Langhan's cell layer. Therefore, he spoke of it as a sarcoma arising from the syncytium and Langhan's cell layer. Ludwig Frankel,[5] however, was possibly the first man to describe the cellular origin of these tumors, and he undoubtedly was the first to observe the proliferation of the syncytium and of Langhan's cell layer. Sänger in his paper regarded the decidual cells as the important elements of the malignant tissue; the chorionic structure he thought foreign or totally adventitious. Sänger's paper, however, was the instrument which directed the attention of the profession to the study of these growths, and shortly after its publication, in 1893, the interest of the profession throughout the world was aroused and several similar cases were reported, particularly in Europe, and one by Williams[6] in this country, in 1895.

Gottschalk, in 1894, published a paper in which he disapproved of Sänger's view of the maternal origin of these growths, and stated that he believed the disease arose primarily in the fetal tissues. From this assertion the old view of the destructive action of hydatidiform moles was revived; that is, that the fetal tissues have the power of invading and destroying the maternal structures. Frankel later (in 1895) reported a case of deciduoma malignum which he described as arising

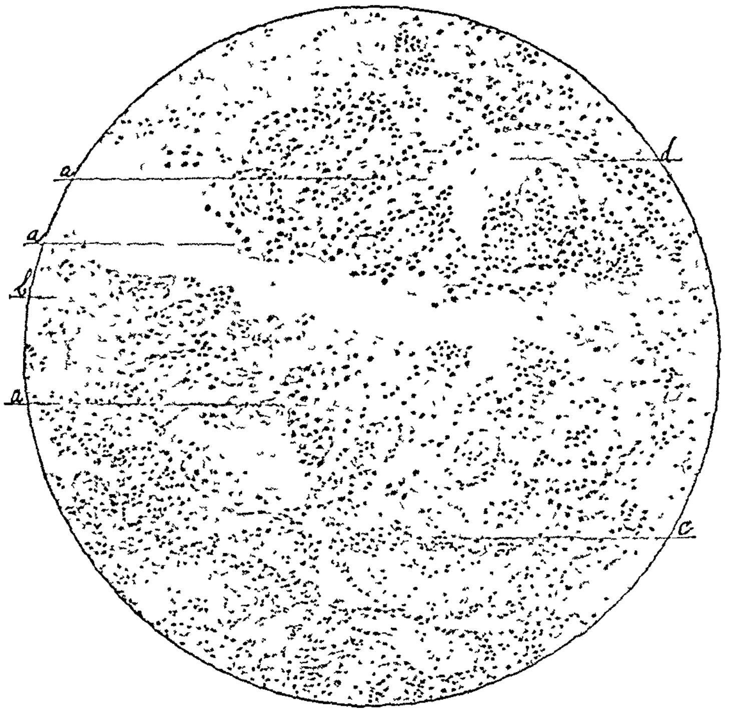

Fig. 2.—Low power microscopic section of tumor removed from its central portion. a, a, a, Large wandering decidual cells. b, Leucocytes. c, Chorionic villi showing marked disturbance in Langhan's cells. d, Non-nucleated protoplasmic masses.

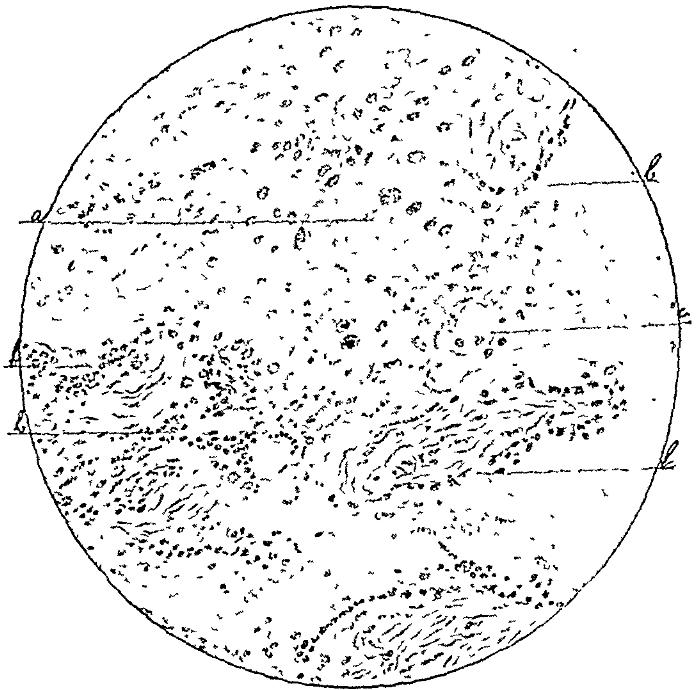

Fig. 3.—High power microscopic section removed from the tumor at its junction with the uterine structures. a, Collection of large decidual cells. b, b, b, b, Chorionic villi showing proliferation of their cellular covering. c, Large multinucleated cell containing a vacuole.

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[1] Sänger: Centlb f. Gynak., No. 8, p. 132.

[2] Ib.: Arch. f. Gynak., vol. xlvi, No. 1, 1893.

[3] Chiari: Wiener med. Jahr. der Kinderheilkunde Gesell. der Aerzte, vol. vii, 1887.

[4] Gottschalk: Berliner klin. Woch, No. 4, 1893; Arch. f. Gynak., vol. xlvi, No. 1, 1894.

[5] L. Fränkel: Arch. f. Gynäk., vol. xlviii, 1895.

[6] J. W. Williams: Johns Hopkins Hosp. Rep., vol. iv, No 9, 1895.

from the syncytium, a structure which he thought was derived from the uterine epithelium. In the same year, 1895, Marchand[7] contributed an article claiming that these tumors originated in the two-celled covering of the chorionic villi. In the same year, Williams also recognized the relation of these growths to the chorionic epithelium. He recognized and described Langhan's layer of cells, but considered the syncytium the important element in the growth, and the latter, too, he was rather persuaded to believe of uterine origin. The writers of the present day nearly all seem to agree with the theory set forth by Marchand that these tumors are of chorionic, fetal or ovular origin. Many of the cases that were originally reported as malignant bladder mole, sarcoma of placenta, and sarcoma deciduo cellulare, etc., have been carefully re-examined and found to be true chorioepitheliomata. This work has been done since Marchand published his observations as to the character and origin of the "so-called decidual tumors and hydatid mole."

Veit,[8] however, still continues to adhere to his original view that the disease is of maternal origin, and that a tumor of the character of the chorioepithelioma could not arise from fetal tissues. He therefore maintains that the old term deciduoma malignum is correct. He still claims, furthermore, that the primary disease is a sarcoma of the corpus uteri, which is cellularly modified, or given special features, such as syncytial conformation by some of the cells, by a superimposed pregnancy. In the strength of his argument, Veit cites the history of a tumor of this nature which he removed and which resembled strikingly a deciduoma. The tumor showed many villi with actively proliferating epithelium and many large cells (many polynucleated) in the circumjacent uterine tissues. These he regarded as sarcomatous cells of maternal origin and as the essential elements of the disease. The presence of villi Veit does not regard of importance, and he states that their existence is merely an accident of the existing gestation. Veit claims that he has never observed the infiltration of fetal elements. He would, however, regard the demonstrable infiltration and destruction of tissue by fetal cells as high evidence of malignancy. He also admits that the similarity between the large cells interspersed with the maternal tissues of the normal placenta, or an adjacent deciduoma, or the cells of the chorionic epithelium, or the cell masses of the tumor, are strikingly exact, but he does not believe, however, in the genetic continuity existing between the two.

As a rule, most late observers have but little difficulty in tracing the genesis of these cells. Teacher,[9] in his discussion of chorioepithelioma before the London Obstetrical Society in 1903, stated that he was able in all his cases to demonstrate the origin of these cells very plainly. Furthermore, he asserted that he was able to demonstrate also their destructive action. The distinctive difference between Veit's and Marchand's theories, histologically, is that learned in the different significance attached to the cellular elements composing the tumor. Veit,[10] in his paper on the deportation of chorionic villi, eludes this question when he reaches the relation of that process to deciduoma malignum. Teacher, in personal conversation with Professor Veit, learned that, though he were forced to admit that these cells were not sarcoma cells of maternal origin but were derivatives of the chorionic epithelium, the theory which we now, in this country particularly, have almost generally accepted, he would, nevertheless, still hold that some pathologic condition inherent in the mother preceded the diseased condition of the ovum. This, Teacher, in his discussion before the London Obstetrical Society on chorioepithelioma, says may be even so, but, notwithstanding, it does not disprove that the elements which enter into the tumor formation are fetal.

Horrocks,[11] in discussing Dr. Teacher's paper, states that from his personal study of several cases of deciduoma malignum, he does not believe we are in a position at present to say that all cases are either of maternal or of fetal origin. He believes, with Lockyer[12] and others, that there are two kinds of malignant tumors associated with pregnancy: one of decidual (maternal) origin of the sarcomatous type, for which he thinks deciduoma malignum the proper term, and the other chorioepithelioma of fetal (ovular) origin of the carcinomatous type. This stand is taken by King[13] in a paper read in Washington, February, 1904.

Marchand's theory is the one now most generally accepted, for he has demonstrated clearly the relation of the protoplasmic masses of the tumor with the syncytium and the relation of the individual cells with those of Langhan's layer. Peters[14] also has observed the true genesis of the epithelial layers of the chorion. He demonstrated that the syncytium and Langhan's cells are derived from the ectoderm, therefore it follows that these tumors are undoubtedly entirely fetal or ovular in origin, and arise from a malignant proliferation of the two layers of the chorionic epithelium.

In reviewing the history of the so-called deciduoma malignum, I have found that the term had been applied to conditions of the uterus characterized by hyperplastic states of the decidua, to tumors of the decidual structure, all of which were of unknown character, long before the publication of Sänger's paper, by Maier,[15] Küstner,[16] and Klotz.[17] The malignant tumor, however, now under consideration, had never before the publication of Sänger's paper been definitely differentiated from other malignant tumors of the corpus uteri, and to him alone belongs the honor of pointing out their distinctive family relation. Gebhard reported 3 cases of chorioepithelioma in 1897; in all of these the characteristic cellular elements and syncytium were found present. The second case strikingly demonstrated the cellular origin of the tumor and in every way confirmed Marchand's theory regarding the genealogy and the relation of the tumor cells. Gebhard found in the wall of the uterus, far from the main growth in his second case, a villus from the surface of which the chorion or ectodermal cells could be demonstrated.

NOMENCLATURE.

With the genealogy of these growths definitely established, it would seem that their distinct relation and a definite terminology should be accepted universally; but even now, despite the almost universal acceptance of Marchand's theory as to the genesis of these tumors, there is still considerable discussion over the nomenclature of these growths, many investigators still clinging to the term deciduoma malignum, while others, and the majority, too, now accept the term chorion epithelioma, or, more recently, chorioepithelioma. Teacher considers syncytium a bad name, because the syncytium is not the characteristic element of the tumor. The most characteristic thing I have endeavored to point out in this paper is the physiologic prototype. Teacher, in his paper, favors the term which will indicate some origin of the tumor and believes that chorioepithelioma malignum is the best. He does, however, also favor allowing the term deciduoma malignum to remain as a clinical name. Moreover, the term, he says, has been so completely abandoned that it has ceased to be misleading.

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[7] Marchand: Monat. f. Geburt. u. Gynäk., vol. i, June, 1895; Monograph, No. 1, 1903.

[8] Veit: Volkmann's Sammlungen klin. Vort., No. 254, 1885; Zeits. f. Geburt. u. Gynäk., vol. vi, 1886; Zeits. f. Geburt. u. Gynäk., vol. xxxii, No. 1, 1895.

[9] Teacher: Trans. London Obs. Soc., June 3, 1903.

[10] Veit: Handbuch der Gynäk., vol. iii, No. 2, Wiesbaden, 1899, p. 538.

[11] Peter Horrocks: Brit. Med. Jour., Oct. 5, 1902.

[12] C. Lockyer: Trans. London Obst. Soc., January, 1902.

[13] King: Trans. Washington, D. C., Obstet. Soc., February, 1903.

[14] Peters: Centralb. f. Gynäk., No. 29, 1902.

[15] Maier: Arch. f. Gynäk., vol. xxxiii, 1888.

[16] Küstner: Arch. f. Gynäk., vol. xxxiii, 1881.

[17] Klotz: Arch. f. Gynäk., vol. xxix, 1887.

PATHOLOGY.

The tumor, as a rule, follows pregnancy, abortion, or the expulsion of an hydatidiform mole. Indeed, it has been learned that almost 50 per cent. of the cases of hydatidiform mole has been followed by chorioepithelioma. Metoz[18] collected 98 cases of chorioepithelioma from the literature and found in this number 48 preceded by hydatidiform mole. In Teacher's collection of 188 cases, 73 were preceded by mole.

The tumor usually is situated within the uterine cavity, though cases have been reported where the growth has occurred primarily in the vagina. Again, it has occurred primarily in the Fallopian tube, following a tubal pregnancy. It has also been reported to have been observed primarily in the ovary, and also in the brain. These are all possibly cases in which deportation of the chorionic elements has occurred prior to labor, as almost every instance of cases thus recorded has occurred soon after parturition. Busse[19] reported two cases of the disease in which the tumor developed primarily outside the uterus. In one it occurred in the left ventricle of the heart, with secondary deposits in the lungs, brain, kidneys, liver, spleen and intestines; in the other the disease developed in the parametrium, vagina and lungs, the uterus remaining entirely free. These may be instances of the deposition of elements of the chorion prior to the termination of the pregnancy, which developed a malignant change after its completion. Devitski[20] also reports a case of the condition occurring primarily in a virgin 75 years of age, with secondary growths in the lungs, liver and spleen. Steinert[21] reports an instance of embryonal tumors of the genital glands occurring primarily in the testicle, containing pavement and cylindrical epithelium, smooth muscle fiber and chorioepitheliomatous elements, particularly the syncytium and Langhan's cells. When the tumor is situated in the uterine body it is, as I have observed from my own case and from those recorded in the literature, situated in the fundal region and in the posterior wall. The growth varies in size; in some instances it can scarcely be palpated and in one case recorded it was felt as a simple scar, while in the same patient universal metastases were observed. Therefore, the dimension of the growth does not in any way speak either of the benignity or malignancy of the tumor, but it would seem that those characterized by large size are less malignant and vicious than those of small size. The large tumors, too, usually contain chorionic villi, and these, as I have stated, appear to run a milder and calmer course than those of wholly cellular composition.

The tumor may be large, however, and may fill the entire uterine cavity, even dilating the interior to a considerable extent. Croom[22] reports a case of chorioepithelioma malignum in which the tumor weighed 7½ pounds. The uterus itself varies extremely in size. It may be small or apparently of normal size, depending, of course, on the size of the growth. In some of the cases which I have studied it extended to the umbilicus. The growth itself, in almost every instance, in the early stages is irregularly nodular. In this stage it is more or less firm and imparts to the tactile sense an impression of a fibroid tumor. Later, as hemorrhage takes place into the tumor substance, from the penetration of blood vessels by the chorionic villi, and the erosion of the vessel walls, it becomes softer and somewhat friable, and in the still later stages necrosis and sloughing take place. and then we simply find a scooped-out, sloughing ulcer occupying a site in the uterine wall.

In the early stages the growth confines itself to the superficial portion of the lining membrane of the uterus, though at no time is there a sharp line of demarcation between the malignant structure and the uterine wall, as is seen in placental polypus or in cases of retained placenta or membranes.

As the tumor ages, penetration of the mural portion of the uterus occurs, and even in the early stages on microscopic examination the wandering malignant cells will be found between the uterine muscular tissue, and penetration of the wall may take place. In a case recorded by Noble[23] and in one by Hirschman the uterine wall had been completely perforated and the wall of the bladder in each case was involved.

The tumor structure before necrosis and ulceration take place might conveniently be divided into three portions: The basal portion or that portion in juxtaposition to the uterine structure, and the true, active, live portion of the growth; a second and middle portion or body which is composed of blood clot and necrotic tissue, wandering cells and fragments of chorionic villi; a third, the outer or free marginal portion or that portion free in the uterine cavity, composed of a capsule-like membrane. In the early stages this is of a smooth grayish-pink or grayish-green color, while the middle portion is more of a dark blood-coagula color.

METASTASIS.

One of the most remarkable characteristics of chorioepithelioma in the terminal stages and in some cases in the comparatively early stages, is the tendency to early metastasis to other viscera; and from the study of my collection of cases, in several instances, symptoms of metastases were the first manifestations of the disease, and suggested the possible existence of an *intrauterine* chorioepithelioma. In one patient the first evidence of the disease was cerebral irritation and later right-sided hemiplegia. In other cases the presence of the disease was first manifested by coughing, pleural pain and hemoptosis, thus indicating the presence of *malignant emboli* in the lungs. In several cases, too, the growth was first discovered in the labia and vaginal walls and the symptoms of the condition *first directed* to these structures. Of course the disease, as will be seen, occasionally apparently occurs primarily in these structures. The unusual tendency to widespread metastasis is undoubtedly due to the greatly increased vascularity in the organs of the pelvis, as a result of the pregnancy. The vessels, we know, at this time are multiplied and enlarged and, therefore, readily receive and convey the chorionic elements throughout the body. Of course, it is not improbable, as I have pointed out, that deposition of the chorionic structure takes place prior to the termination of the pregnancy.

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[18] Metoz: Rev. de Gynecol., Paris, vols. iv and v, 1901.
[19] Busse: Virchow's Arch., Nov. 4, 1903.
[20] Devitski: Med. Obosreni, vol. lvi, No. 5, 1904.
[21] Steinert: Virchow's Arch., Nov. 4, 1903.
[22] Croom: Med. Press and Cir., June 25, 1902.
[23] Noble: Amer. Jour. Obst., *vol. xlvi, No. 3,* 1902.

LOCATION.

The tumor, as a rule, is primarily situated in the uterine cavity, though cases are recorded, 9 in number, in which the disease occurred primarily in the vagina. It may be primary, also, in the Fallopian tube, following a tubal pregnancy or tubal mole. The organs most frequently involved in metastatic deposits are the lungs, vagina, kidneys, liver, brain, spleen, ovaries, intestines, broad ligaments, pleura, mesenteric glands, pancreas, heart, stomach, and pelvic lymphatic glands. Lymphatic gland infection, however, seems to be extremely rare. In my collection of cases, one instance is recorded in which the disease was first recognized by an apparent involvement of the left inguinal glands. This was first thought to be an adenitis, but incision into the tumefaction liberated a large quantity of bloody fluid, and sections taken from the diseased area showed the characteristic morphologic construction of the structure. In another case in my collection the pelvic lymphatic glands were involved. There are only 7 cases recorded in literature of lymphatic gland involvement; this, of course, is due to the fact that the malignant cells are invariably deported by the hemal circulation and rarely through the lymph channels. E. Seifert,[24] from his study of chorioepithelioma malignum, states that in those cases in which metastases are formed the brain is involved in about 10 per cent.

PATHOLOGIC HISTOLOGY.

On microscopic examination of these structures, different elements will be recognized. In some, nothing but large decidual cells, blood detritus and blood sluiceways will be found, while in others chorionic villi with their characteristic structure with proliferation of the Langhan's layer of cells and syncytium will be seen, a picture observed in my case. A characteristic of the cells is their great tendency to undergo modification. In certain areas, cells undergoing various degenerative changes will be noted, while in others a state of extreme cellular activity will be seen. Teacher says that in the study of chorioepithelioma it is very essential for proper appreciation to have material which shows the growing zone of the tumor and the stages of cell metaplasia or cell division. In such a part he states that three principal cell forms will be found: The synctium, large masses of protoplasm of various shapes, rounded, drawn out bands and whorls or irregular masses. These are very frequently vacuolated and may contain blood, as will be noted in the case I have reported. These syncytia or so-called plasmodia contain numerous nuclei. In nearly all instances these will be found to stain deeply and uniformly. The protoplasm of the cells is opaque and stains deeply with plasma stains. Karyokinetic figures are not found. Assemblages of cells are also seen growing in intimate relation with the syncytium. In the early stages the cells are small, well defined, and pack closely together. There is no stroma between them. The nuclei of these are round or oval and stain moderately deeply. Nuclear activity in these cells is always characteristically well marked. The protoplasm is pale and clear. In some cases it is delicate, too, and finely granular and stains but thinly with the plasmic stains. These cell masses are frequently found within the syncytium. They may show a border of syncytium resembling endothelium. A characteristic feature of the tumor on microscopic examination, in case the chorionic villi are present, is that the cells which I have described will be recognized as developing from the syncytium, the other cells from the second layer of cells covering the chorionic villi or Langhan's cells. Modifications and intermediate forms of the above cells, of course, are often seen.

The individual cell, Teacher claims, is rather the primitive form and the syncytium is a modification of it. He classifies the intermediate forms and the various infiltrating cells together as the first cell type. Teacher found the tumor cells usually assembled in masses of some size and attached to the uterine tissues. This is strikingly demonstrated in the case under my observation. These assemblages of cells are really the active portion of the tumor and the tissues external to these layers or collections of cells or that occupying the free uterine cavity is made up of lymphatic tissue and blood clot, as a rule; hence, the peculiar gross appearance of these tumors. The blood clot seems to be a characteristic feature of the growth, and it seems to be due to the growing and proliferating tumor eroding the vessels and causing hemorrhage into its substance proper. This is of the utmost importance, for in doing a test curettage for diagnostic purposes we often secure only the outer portion or degenerated portion of the growth, and, therefore, may be led astray as to the true character of the tumor on microscopic examination. It is important, therefore, in doing a curettage for diagnostic purposes to be sure of removing tissue in contact with the uterine wall. In the cell masses described under connective tissue, no blood vessels are present, as a rule.

LINE OF INVASION.

A peculiar and characteristic feature of chorioepithelioma is that the line of invasion differs distinctively from that of carcinoma. In chorioepithelioma the process is a destructive one, while in carcinoma there is usually a reactionary zone of inflammatory material and invading cells, giving rise to the indurated base, so characteristic of carcinomatous tumors. This, as you know, is nature's method of throwing up breastworks of defense to halt the invading army of malignant cells.

The relation of the degeneration of the muscular structure of the uterus to the tumor cells has been a subject for much discussion. In nearly all instances, some of the cells are found interspersed between muscular fibers in such a manner as to lead some investigators to believe that they are really degenerating muscle cells. It has been demonstrated, however, that true myomatous degeneration does occur and it is also firmly established, as I have pointed out in preceding paragraphs, that the neoplastic cells are found infiltrating between the muscle fibers, and it is by their action that fibrillar degeneration takes place. In my specimens I was able to locate a few choriomatous cells in the intermuscular spaces, but I did not recognize any degeneration of the muscle fibers.

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[24] E. Seifert: Arch. f. Psych., No. 1, 1904.

inski. His collection of 124 patients gave an average of 32 years. This corresponds, he says, to the generally accepted age of reproduction. The youngest patient observed in my collection of cases was 17 years; the case was one of tubal gestation and was reported by Marchand. The oldest patient in my number of cases collected was 58 years. The average age of women suffering from carcinoma of the uterus is stated as 54 years. It is seen, therefore, that age bears a direct influence in that the disease occurs during the active reproductive life. In nearly all my cases, the condition occurred in patients who had previously borne children, ranging from 1 to 11 labors. The average number of pregnancies recorded in a collection of 98 cases was 4.2.

The lapse of time between the termination of the pregnancy and the manifestation of the symptoms varies somewhat. In some cases the symptoms are progressive from the time of the labor. Indeed, in one case observed in my collection, symptoms began before the termination of the pregnancy, that is, bleeding. This, however, may simply have been a coincidence and not a manifestation of the disease. As I have stated before, however, the time in the majority of cases must be counted by days and weeks, not by months. One patient in my collection, who had one normal labor at the age of 26, was free from symptoms for 6 years before the disease manifested itself. In another patient of 24, the disease did not begin until two and one-half years after the completion of a normal pregnancy. The duration of the time existing between the completion of the labor, whether it be mole, abortion or normal labor, and the evidence of symptoms does not seem to be influenced either by a mole pregnancy, an abortion or a normal pregnancy. The average lapse of time in Ladinski's collection of cases was 8 weeks, 7 weeks and 5 weeks after a mole pregnancy, abortion, or a labor at term, respectively. McCann[38] also reports a case occurring after the menopause. Marchand explains these phenomena of a long period of latency by citing the fact that portions of epidermis are often included in the closure of some of the embryonic clefts. These, as we know, may remain quiescent, 10 or even 20 years, and then, for some unaccountable reason, suddenly spring into activity and form neoplasms. Marchand thinks, therefore, that it is not strange to find the trophoblast lying dormant for a varying period of years and then suddenly becoming active. Croom found in cases he collected from the literature that the average time for the development of symptoms after normal labor was 6.9 weeks; after abortion, 11.4 weeks; after mole, 10 weeks.

MALIGNANCY.

An interesting question in the study of chorioepithelioma, and one which is not perfectly understood, is why these growths vary so greatly in malignancy. In some cases we find the patient succumbing before operative interference is instituted, or the mother of a few days or a few weeks, while in others we find that the patient recovers after a simple curettement, and, indeed, in some spontaneous healing is asserted to have occurred, and in others, despite the evidence of metastatic deposits in other viscera, we find patients recovering after radical operation. In the large majority of cases, however, we find that the behavior of chorioepithelioma is characterized by the highest type of malignancy. Death is usually the ultimate result. It is found that in cases in which villi are present a lower degree of malignancy exists. It is further stated that primary growths in the vagina are less malignant than when located in the uterus, though from the study of my cases this assertion does not hold good. In 9 cases reported in which the tumor was located primarily in the vagina, early dissolution occurred in all. Another question of extreme interest is why metastases should disappear after the removal of the primary exciting focus and why, as in cases reported by Noble and Herschmann, partial removal of the primary growth should be followed by the disappearance of portions which have infiltrated, as in Noble's case, the bladder wall, and which could not be removed. These phenomena are possibly explained by Ehrlich's side-chain theory. McCann, in his study of cases, believes the polypoid or circumscribed form of the chorioepithelioma less malignant. I believe this inference to be drawn from the fact that a tumor presenting such a conformation is only observed in its incipiency, and, therefore, if proper treatment be instituted, a good result may obtain.

CLINICAL SYMPTOMS.

In describing the symptoms of chorioepithelioma we might conveniently divide them into two stages: 1, the incipient and formative stage; 2, the terminal stage or stage of metastasis and absorption. The symptoms in the incipient stage of the disease are first manifested by bleeding. This is an invariable symptom and usually is the first to attract attention. It appears without any cause, and is very irregular. In some instances it may be scanty, while in others it may be extremely profuse and serious. A characteristic of the bleeding of chorioepithelioma is that it is not alleviated by ordinary means of treatment. In all the cases in my collection the patients were, in almost every instance, curetted, and this seemed only to aggravate the condition, or only to control it temporarily. In one or two cases a simple attempt at examination was followed by extensive hemorrhage and profound collapse, the hemorrhage being controlled and the life of the patient saved only by immediate packing and resort to stimulation. The hemorrhage in some instances is continuous, while in others it appears at irregular intervals and varies in quantity. During the period of quiescence, a thin, watery discharge is usually complained of. As the disease progresses, bleeding becomes more pronounced from the erosion of the vessels. Necrosis of the tumor takes place and a foul, profuse discharge is present. In the early cases reported, pain was not recorded as a symptom, but in the later observations this was almost invariably present. It is of a crampy, boring character, situated in the lower portion of the abdomen. In my own case, and also in the case recorded by Ladinski, in April, 1902, pain was the first symptom complained of. Anemia and emaciation are quite marked in all. In the case under my observation the patient had lost several pounds before admission to the hospital. Prostration is also quite profound.

In the second stage, the stage of metastasis and absorption, all these symptoms become more pronounced. Should involvement of the lung, which is the most frequent organ affected by metastatic deposits, occur, pain, cough, hemoptosis and pleural friction sound and areas of consolidation may be manifest. Metastatic deposits in the brain would be evidenced in the first stage by cerebral irritation, later by paralysis. Deposits in the kidney give rise to pain, and possibly to hematuria. During the absorption stage there are, of course, taken into the human economy products of necrosis, and therefore symptoms of sepsis and exhaustion, such as sweating, elevation of temperature from 100 F. to 103 F., rapid pulse, nausea and vomiting will be present.

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[38] McCann: Brit. Obst. and Gyn. Jour., No. 281, 1901.

In the terminal stages of the disease, malignant cachexia also becomes quite marked. If penetration of the uterine wall occurs, the bladder or rectum may become involved, and, therefore, symptoms referable to these organs will be present.

PHYSICAL SIGNS AND DIAGNOSIS.

The diagnosis of chorioepithelioma from our present knowledge of the condition should be comparatively easy. Taking into consideration the characteristics of the preceding clinical history of a normal labor, abortion or tubal pregnancy, or molar labor, followed by the symptoms above enumerated, should lead to the suspicion of the disease. This, combined with the bimanual examination and a test excision of a portion of the tumor, would undoubtedly establish the true character of the lesion. We should not, however, depend on the microscope alone, for simply finding syncytial masses in curetted material after a mole labor, abortion or normal labor, does not necessarily indicate the presence of chorioepithelioma. Particular attention should be paid to the clinical symptoms and physical signs. In the early stages of the condition, the uterus is found to be somewhat enlarged. This may vary, according to the age of the tumor, from merely normal size to the tumor reaching almost to the umbilicus. The uterine wall is somewhat softer than normal and softer in consistence than if due to the presence of a fibroid tumor. Of course, in the early stages, the consistence of the uterus would not be affected; it is only when the disease extends into and destroys the mural portion of the organ that its consistence would be altered. In nearly all the cases recorded the os uteri is found dilated, admitting, as a rule, one finger, and in some instances two fingers. The growth in some instances is found to be smooth, and nodular, while in others it may be more or less uniform and present as a simple nodule in the uterine wall, or as a soft scooped-out ulcer. As I have already stated, the tumor, as a rule, is situated in the fundal portion and posterior wall. This, from the cases I have collected, seems almost characteristic of the growth. The consistence of the growth varies; in the early stages it may be more or less moderately firm, but later, as hemorrhage and necrosis take place, it becomes friable, and in the terminal stages, when necrosis is complete, the tumor itself may have totally disappeared and nothing but a scooped-out, sloughing ulcer will be found in the uterine wall. It seems to project from or, in fact, infiltrate the wall, or, in other words, it is a portion of the uterine structure, and bleeds on the slightest provocation. It could readily be differentiated from a submucous fibroid by the history of the case, by the characteristic feel, and, finally, by microscopic examination. It would be differentiated from a carcinoma by the clinical history and by the consistence of the mass, particularly the basal portion of the mass. In carcinoma, it would be hard and indurated, while in chorioepithelioma it is a soft, sloughing ulcer.

Lastly, microscopic examination of sections of the tissue would reveal their true character. In sarcoma of the corpus uteri it would be differentiated by the clinical history, by the rapidity of growth and by microscopic examination. The metastatic deposits observed resemble to a large degree hematomata, but these on microscopic examination, as a rule, will be found to contain the characteristic elements of the growth.

PROGNOSIS.

The prognosis of chorioepithelioma is extremely grave. It is perhaps the most malignant of all tumors, occurring as it does during the full physiologic activity of the patient and with the physiologic process of pregnancy, in an organ in which at this time the blood vessels are greatly multiplied and enlarged, and, therefore, in a condition highly favorable to the transportation of these malignant cells to other portions of the body. The prognosis would seem to be somewhat modified by the character of the growth, for, as I have pointed out, in certain forms of chorioepitheliomata the tendency toward malignancy is not as marked as in others, those we find containing chorionic villi being less malignant than those without these elements. In 124 cases recorded by Ladinski there were 51 recoveries and 73 deaths, giving a mortality of 59 per cent. In 66 patients operated on radically, 57 by vaginal hysterectomy, 6 by abdominal hysterectomy, 3 by laparotomy, 50 of these recovered. Dorland's[39] 52 cases recorded in 1897 gave a mortality of 73 per cent. In Teacher's 188 cases, 99 patients were treated by radical operation. In 87 there was either no operation or it was not radical. Out of the last number 83 died. The fate of 2 was not known. In 2, spontaneous healing occurred. Of 36 deaths, 11 occurred within a few days, and 25 after longer intervals. Of the patients operated on, 16 showed no improvement, 9 made a good recovery. in 5 several months of good health were enjoyed before recurrence. In 5 patients only did the disease recur after more than 6-month intervals. Of the 63 recoveries, 32 patients were well 6 months after the operation, 24 of these after 1 year, 13 after 2 years. Of the patients who had shown signs of disease in the lungs, 8 operated on recovered; in 2 others there were growths in the vagina and 1 in the ovary. In 3 of the cases operated on incomplete operation was done, but the patients recovered. Death usually results from metastases, hemorrhage, exhaustion and sepsis. In 210 cases of hydatidiform mole collected by Findley[40] there were 49 deaths, a mortality of 25 per cent. Of this number, 32 patients died from chorioepithelioma.

Metastasis, however, must not be considered a contraindication to operation unless the patient's condition is in extremis, for several cases are recorded in which recovery occurred where metastatic deposits had been quite marked. The disappearance of metastasis after radical operation is explained by the fact that the malignant cells can only live in live blood and not in extravasated blood; wherever metastatic deposits occur, hernial extravasation occurs and they are, as it were, responsible for their own destruction.

TREATMENT.

The treatment of chorioepithelioma should be the same as for malignant disease elsewhere in the body—complete extirpation of the uterus in the field of healthy tissue at the earliest possible moment should be the only operative resource considered. If we knew more, however, of the early development of chorioepithelioma, preventive means possibly could be instituted. In cases of hydatid mole, however, precautionary measures can be successfully adopted. Bonnaire insists that every woman who has had a hydatidiform mole should be regarded as menaced with malignant disease. After a molar labor, the uterus should be thoroughly cleaned and packed to induce the uterine muscle to contract and thus to regain its consistence and thickness. Bonnaire[41] recommends that the cavity of the uterus be swabbed with creosote or with zinc chlorid and that the uterus should, at the interval of 10 or 15 days, be curetted and the curetted material subjected to microscopic study. Findley recommends the same procedure. If, after these operations, atypical metrorrhagia persists, inoculation of the uterus with malignant elements should be considered probable, and the organ should be removed, even if unable to detect any intrauterine nodule or ulceration, by digital palpation or by microscopic examination of the scrapings. In every case of this condition the uterine cavity should be thoroughly cleaned of all elements of this tissue. This should be subjected to careful microscopic examination and should any atypical proliferation of the cells of the villi or suspicious curetted material be seen, early hysterectomy should be performed. I am indebted to Dr. E. E. Montgomery for the privilege of reporting this case.

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[39] Dorland: Univ. Med. Mag., No. 8. vol. ix. 1897.

[40] Findley: Amer. Jour. Med. Sci., No. 3, vol. cxxv, 1903.

PROPRIETARY THERAPEUTICS.*

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Perhaps I should apologize for attempting to say anything new on such a well-worn subject as the expediency of using proprietary drugs. Let my apology be the conviction that the increasing prevalence of the use of these remedies is exceedingly detrimental to the best interests of the medical art.

I wish to consider that class of agents, commonly called nostrums, which are mixtures of several more or less well-known ingredients the use of which threatens to relegate prescription writing to a place among the lost arts. In no way do I refer to definite chemical compounds which may be the property of some manufacturing druggist. While I am by no means certain that the introduction into medicine of these products of chemical ingenuity has been an unmixed blessing, any opposition to them is founded on grounds essentially different from those which form the basis of my protests against the pharmaceutical nostrum, whether parading in its true guise or attempting to hide its real character behind that magic shibboleth, "synthetic."

The great fundamental objection to the use of proprietary mixtures is an objection to all set and unalterable formulæ. Disease offers an ever-shifting picture, never presenting precisely the same problems in any two instances, varying from day to day and perhaps from hour to hour in its morbid manifestations, and unless the treatment be capable of easy modification to suit the changing conditions we can not hope to accomplish the best results in our warfare against it.

These set formulæ are presumably constructed on the same plan as ready-made clothing which is made from a large number of measurements to fit the average man. As a matter of fact, however, the average man is non-existent and the ready-made suit can never fit exactly. Clothing, however, is one of the minor cares of life, and the majority of us, having something more important to think about, are satisfied if it fits approximately well, but when we are dealing in human health, and it may be at times in human life, can we justify our satisfaction with an approximately fitting remedy?

Another objection to these substances is their secret or semi-secret nature. Of those abominations which simply advertise a descriptive title and the assertion that what not "is a specific in all forms of" this or that (you know the type), it seems almost unnecessary to speak. We preach to the laity of the evils of self-medication; but I confess that it does not seem very clear to me why the childlike faith of a sick man in the veracity of a nostrum advertisement in the daily press is any less rational than the childlike faith of the physician in the same sort of an advertisement in a medical journal. Indeed, the employment of these fancy-named specifics is a direct temptation to self-medication. In the show windows of one of those so-called drug stores whose chief business is the sale of soda water and silverware with patent medicines as a side line, recently was exhibited a remedy widely advertised to physicians, flanked on one side by Kilmer's swamp root and on the other by peruna catarrh cure.

A much more elusive and therefore more dangerous evil lurks in that class of mixtures which attempt to cloak their secrecy with a deceptive show of frankness. I think you will grant that the physician is rarely justified in the use of remedies concerning which he has no knowledge, and I maintain that the publication by a drug firm of whose integrity the physician is absolutely ignorant, of a professed list of ingredients of some mixture is not sufficient knowledge to pardon or to warrant the use of that remedy. In the first place, if the published formula be correct it is not enough to know simply the composition of a mixture, the exact quantities must also be known; there is a vast difference between the effects of one grain and of one hundred grains of opium. Moreover, there is no means of knowing that the formula is a true one, for many of these corporations do not hesitate to pervert the truth. For example, of a widely known anti-rheumatic mixture it was formerly proclaimed in flaming headlines that it contained no salicylic acid, but to-day the manufacturer sells it as a palatable preparation of the salicylate of sodium; another advertised as passiflora tablets has recently been shown to contain a notable amount of acetanilid.

The common defense of the secret nostrums is based on its value as property. As a typical example, I quote from a recent editorial in an evidently subsidized medical journal; the writer says: "The manufacturer who perhaps has spent hundreds and thousands of dollars in perfecting the formula, can not be expected to give gratuitously the product of his time, thought and money." I ask: How have these hundreds and thousands of dollars been spent? Can a pharmacist hire men to be sick that he may experiment on them with varying combinations of drugs? Does he dare insinuate that the medical profession is ready to barter in human suffering for the enrichment of the nostrum vendor? No, the hundreds and thousands of dollars have been spent in suborning medical journals to laud some hit or miss formula thrown out of a drug factory in the form of a pill, sugar coated with deceit and falsehood.

The defenders of these conglomerations hint vaguely at a wonderful augmentation of beneficial powers, the result of some mysterious manipulation of some supernal pharmaceutical skill which has overturned and transformed the properties of a well-known drug. Are we, as reasonable human beings, expected to believe such twaddle, carrying us back to the dark ages when the black art and fetichism were blood brothers of medicine?

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[41] Bonnaire: Rev. de Gynécol., Paris, vols. iv and v, 1901.

* Read before the Columbus Academy of Medicine, 1905.

What remarkable pharmaceutical ability does it require to triturate together acetanilid and sodium bicarbonate, and press them into a tablet stamped with a symbolic initial? Can anyone tell me how the addition of potassium bromid and the extract of hyoscyamus makes chloral hydrate "the safest hypnotic known"?

That manufacturers often realize the absurdity of such claims is shown by the number of those who manifest a desire to pose as "ethical" by the publishing of a pretended formula, and yet attempt to obscure the real nature of their mixtures by the use of uncommon names for well-known drugs or by including some plant of which the ordinary physician has probably never heard. The inference, of course, in the latter case is that this rare ingredient is possessed of wonderful healing properties that render the peculiar combination beyond the possibility of imitation. Does it seem probable that if this mysterious plant did possess any such virtues as are ascribed to it, it should have flourished for these thousands of years and escaped the notice of generations of practical physicians, of studious scientists and of far-wandering botanists? We may rest assured that any substance having such remarkable powers would have been known to some member of the medical or pharmaceutical professions, and would have found entrance into that magnificent collection of real medicaments, the United States Pharmacopeia.

Here is an advertisement of a mixture intended for an emmenagogue, which it is stated "contains champaca, abromafastuosa, ferrum, ruta, and apiol." To the uninitiated this seems a truly wonderful aggregation of unknown and therefore potent remedies. But let us investigate. Champaca or champac is an oriental tree of the magnolia family, whose greatest claim for immortality rests on the fact that the poet Shelley has introduced it into his famous song "The Indian Serenade." It has been shown, however, to contain a substance closely allied to camphor. The second ingredient, which is printed as one word apparently for the purpose of deception, is evidently the botanical name of a plant. Now the genus *Abroma* was recommended in the treatment of dysmenorrhea as far back as 1873, but it apparently did not possess sufficient activity to deserve a place in practical therapeutics until some enterprising pharmacist thought of using it to disguise a not very remarkable abortifacient emmenagogue mixture. Of the other ingredients, with which all physicians are probably acquainted, all that remains to be said is that rue is well known to possess emmenagogue properties but it is rarely employed to-day except for the production of criminal abortion. The physician who can not compose a better emmenagogue mixture had better quit the practice of medicine.

Let me call attention to one other example of this effort to confuse the unwary, the simplicity of which is really laughable. A very extensively advertised drug, hailing like other orthodox fakes from St. Louis, is said to be "a palatable preparation of *Panax schinseng*. Panax is the botanical name for the popular Chinese remedy ginseng, whose therapeutic value is about equivalent to that of licorice root. If you want licorice, order extractum glycyrrhizæ.

No condition exists without cause and there must be some strong reason for so general a use of these preparations. It is incredible that mere convenience in prescribing can explain such a widespread popularity without some other influence at work.

One great reason for the flourishing condition of this business is to be laid directly at the door of the profession, that is the ignorance of the action of drugs and of methods of combining them. The subject of therapeutics is all too imperfectly taught in our medical schools, while that of prescription writing is almost completely ignored. If anyone will look over the examinations of various state boards he will find lower marks in prescription writing than in any other subject.

The recent graduate is called on by his first patient, and he has ausculted and percussed the sick man from the tip of the ear to the end of the toe, he has counted the number of corpuscles in the blood, he has taken a sphygmographic tracing of the pulse, he has made a microscopic examination of the sputum and a bacterial culture from the throat, he has tested the urine for acetone and the diazo-reaction, he has determined the percentage of hydrochloric acid in the stomach—all these things have been taught him at his medical school, but no one has thought it necessary to teach him that refinements of diagnosis are but a means to the end of a more successful therapeutics. Perhaps his professor of medicine belonged to the sect of nihilists and taught "leave the patient to nature, and you will get an interesting autopsy!" The young physician realizes that his patient does not want an interesting autopsy and that he must at least make a pretence of doing something, and while his eyes are roving round in thought as to what he can order, they fall on a green and purple announcement received in that morning's mail that "Jones' Creotin" gives wonderful results. Feeling his incompetency and yet fearful of displaying his ignorance is it any marvel that he falls an easy victim to the blandishment of the blotter?

But the most potent factor, I believe, has been extremely lavish and often very shrewd advertising. I read recently an illuminating account of the establishment of a well-known nostrum. The story goes that there was an advertising agent some years ago who was being twitted by a friend as to the uselessness of his calling. The specialist in publicity replied, "Why you can sell anything with proper advertising" and proceeded to mix together some harmless ingredients, gave his concoction a high sounding name, heralded the mixture broadcast throughout the land as a balm for all human woes and to-day is retiring from business a millionaire. We need not flatter ourselves that the medical profession is any less easily duped than is the rest of mankind; after all, the physician is human and there is much truth in the oft-quoted saying of the circus manager that "people like to be humbugged."

A well-known physician in an investigation of this subject two or three years ago calculated that $600,000 was expended annually in advertising secret nostrums. I am inclined to believe that his figures are far short of the mark. The interesting question suggested by these figures is, where does the money come from? Those hundreds of thousands of dollars are coming out of your pockets and your patients' lives, and yet the medical profession is blind enough to continue uncomplainingly feeding these jackals that fatten themselves on human suffering.

Of course the owners of secret remedies as of any other commodity have a perfect right to advertise their wares in any magazine which will publish them, and by common consent it is understood that advertisers are not bound by any ties of truth nor even of probability, but a very grave danger threatens in this connection. The advertisers are not satisfied with exploiting their products in the back of the magazine, they clamor for reading notices and demand a censorship of the whole journal in their interests. In this respect, we may recall the old story of the camel who on a cold night poked his nose into the tent of the Arab and besought that he might only warm his nose. Little by little he intruded his body until finally he possessed himself of the tent and the poor Arab slept out in the cold.

Using the value of their advertising patronage as a club to force complaisance, slowly but persistently the nostrum vendors are possessing themselves of the medical literature until soon our medical journals will be entirely given up to eulogizing proprietary remedies. I believe I am speaking very conservatively when I say that the reading columns of two-thirds of the medical journals of this country are controlled by the proprietors of various drugs.

Only a week or two ago, the editor and owner of a so-called medical magazine told me that he had sold outright four pages of his reading columns to a certain manufacturing house, that is, he had contracted to allow them to print among the reading matter of his magazine four pages of anything that they pleased. It is not alone the smaller publications of purely local fame which have become entangled in this business, magazines of large circulation and high standing are in the snare of the fowler.

Allow me to relate a personal incident. A short time ago I took an article which contained some unmodified truths concerning certain proprietary disinfectants to the editor of one of the oldest and most widely known medical journals published in Philadelphia. Noting the references to the disinfectants, he informed me that it was his unalterable rule never to mention proprietary drugs in the pages of his journal. Thinking that he meant that secret remedies were things that could not be discussed in so substantial a member of medical journalism, I assured him that I had certainly not sung the praises of these remedies and called his attention to one or two paragraphs in the article which he read over and then reached for the last number of his journal and said with a deprecatory smile, "Here is a whole page advertisement of —— ———; were your article to appear they would withdraw their advertisement immediately; here is half a page of —— advertisement. Doctor, I could not think of publishing your article unless you withdraw all mention of these substances."

If it has come to the point that reputable medical journals are afraid to publish the truth concerning proprietary remedies, it is time to call a halt.

But, after all, this condition of affairs is not to be greatly wondered at. A body of men whose motives are purely mercenary are very likely to develop highly specialized consciences which do not respond to any of the ordinary moral stimuli. We need not be surprised, therefore, if whatever power they possess is used unscrupulously for the advancement of their own interests and for the destruction of any opposition to the growth of this power. The most serious obstacle to the success of such aims is the force of public opinion, for I believe that wherever well informed of the real conditions, the sentiments of the people as a whole will ever be in favor of right and morality.

These men being not only venal but shrewd as well, recognize the necessity of poisoning our sources of information, and exert every effort to the debauchery of the medical press. They were even attempting to exploit THE JOURNAL of the American Medical Association, but this slow-moving body has finally roused from its lethargy and the result has been the most hopeful suggestion that has yet been made for the relief of the profession—I refer to the proposed pharmacopeia of unofficial remedies. Both the character of the committee in charge of this work and the preliminary report already published give ground for hope that much good will be accomplished.

But so thoroughly has the work of corruption been done that even erstwhile respectable medical journals have joined the ranks of the sophists who monotonously chant the same refrain: the right of the drug manufacturer to his property. What interest have you or I as physicians in the commercial value of that property? The moral strabismus of the medical press is comprehensible, for into their coffers flows from these ill-gotten gains a constant dribble in the form of advertising patronage, but the obtuseness of the physician who continues to rob himself to enrich the nostrum-monger is of the same class as that which exposes the country bumpkin to the allurements of the shell-game.

FEDERAL CONTROL OF VACCINE VIRUS.[*]

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WASHINGTON, D. C.

"An act to regulate the sale of viruses, serums, toxins and analogous products in the District of Columbia, to regulate interstate traffic in said articles, and for other purposes," and the regulations framed thereunder have now been in effect about 18 months, and I thought it might be profitable as well as interesting to call attention to the great improvements which I believe may fairly be traced to the operations of said act.

Prior to the passage of this law there had been no legal control of vaccine virus in this country; and it would seem remarkable that so important a product as vaccine virus, affecting so intimately the protection of the community against such a loathsome disease as smallpox, should have no public supervision over its manufacture. Any one could make a product, label it vaccine virus and place it on the market regardless of the impurities contained therein or its lack of potency, being governed in this respect only as it affected the business of the firm making it.

Any one interested may obtain a copy of the act by applying to the Surgeon-General of the Public Health and Marine-Hospital Service.

In accordance with the law and the regulations, the Surgeon-General of the Public Health and Marine-Hospital Service caused an inspection to be made of all establishments manufacturing vaccine virus in the United States. This inspection was made by officers of the Public Health and Marine-Hospital Service. As a result of the inspection four firms were found manufacturing vaccine virus according to obsolete methods and being unable to comply with modern requirements of asepsis and laboratory control, preferred to retire from business.

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[*] Read at the thirty-second annual meeting of the American Public Health Association, Havana, Cuba.

On account of certain insanitary conditions and faulty methods of laboratory control of some of the firms, the inspectors found it necessary to recommend that their establishments and methods of manufacture be considerably improved before the issuance of a license could be recommended, the license being withheld until these faults were corrected.

At present there are eight producers of vaccine in the United States licensed to engage in the manufacture and interstate sale of this article. They are

Parke, Davis & Co., Detroit, Mich.
H. K. Mulford Co., Glenolden, Pa.
H. M. Alexander Co., Marietta, Pa.
Fluid Vaccine Institute, Milwaukee, Wis.
Pocono Laboratories, Swiftwater, Pa.
National Vaccine Establishment, Washington, D. C.
Frederick Stearns & Co., Detroit, Mich.
The Cuttler Analytic Laboratory, San Francisco, Cal.

A description of the manner in which the inspections are made will show the thoroughness with which this part of the law is carried out. The officer detailed for this purpose calls on the head of the establishment without notice, stating the object of his visit. Then, in company with the expert having supervision of vaccine production, a rigid inspection is made of all portions of the establishment, including the stables, barns, warehouses, records and animals, especial attention being given to sanitary conditions, the water supply, the screening of stables to protect animals against insects, disposal of refuse, character of food supplies, and proximity to stables used for housing horses (danger of tetanus contamination).

Close attention is given to laboratory methods, especially those of disinfection and bacteriologic control, in order to insure freedom from outside contamination. The inspector also observes the method of glycerinating the pulp, the process of grinding and mixing the virus, the distribution into tubes and the preparation of points. The inspector then observes the vaccination of a calf and the collection of virus from a "ripe" vaccination. All this is done in order to insure the inspector that the technic of the manufacture is safe and effective. The inspector purchases on the open market vaccine made by the concern and it is forwarded to the Hygienic Laboratory of the service, situated in Washington, where it is examined for purity and potency.

In accordance with the law, monthly purchases of vaccine virus are made on the open market and the product is examined in the Hygienic Laboratory. This examination is two-fold, for purity and for potency. The person buying the vaccine virus forwards it to the laboratory with a memorandum giving the retailer's name, date of purchase, conditions under which it was kept in the drug store, and any other facts that he may think pertinent.

When received in the laboratory the package is first examined to see whether the regulations have been complied with in that the name and address of the manufacturer, his license number and the date of manufacture and of return are plainly stated on the label.

For the laboratory examination it is necessary to have at least 20 tubes or points to determine the average number of bacteria per point or tube, the presence of pathogenic organisms and the potency of the virus. Ten vaccines—by this I mean either a point or a capillary tube —are planted and counts are made therefrom. The point is immersed in about 1 c.c. of physiologic salt solution for fifteen minutes to soften the vaccine matter. It is then scraped off with a sterile platinum spatula and is thoroughly agitated to break up the clumps. If a tube, the contents are washed into 1 c.c. of salt solution.

Five drops of the emulsion are placed in the first plate, ten drops in the second and the remainder in the third, and then these are flooded with agar. The plates are incubated for three days at 37 degrees C., and then at room temperature for two days, after which a count of colonies is made.

After the counts are made the different plates are carefully gone over, especial attention being paid to cocci, molds, streptothrices, and any unusual appearing colonies. Practice has enabled those making the examinations to detect immediately the presence of unusual colonies. Of course the number of bacteria is not nearly of so great importance as the kind. One tetanus spore or a few virulent pus cocci would be far more serious than countless numbers of subtilis spores.

The entire contents of eight tubes or eight points are planted in 100 c.c. of freshly prepared and recently boiled glucose-bouillon and grown at 37 degrees C. At the end of forty-eight hours 1 c.c. per 1,000 grams of rabbit of the top growth is inoculated into the peritoneal cavity. If the rabbit sickens or dies an effort is made to determine the cause. At the end of seven days the remainder of the bouillon growth is filtered through porcelain and 0.2 c.c. of the filtrate is inoculated subcutaneously into a mouse to determine the presence of tetanus toxin. This method we believe to be a simple and sure one for the determination of tetanus contamination.

Cultures of cocci and certain other organisms are made from the plates and their pathogenicity ascertained by animal inoculation. Within the past year *streptococci* have been found on but rare occasions. Seldom has a virulent staphylococcus been found. Streptothrices have been found in the product of almost every manufacturer, though not virulent for laboratory animals. No evidence of tetanus has been found in any vaccine examined in the Hygienic Laboratory.

The product is finally tested for potency by primary vaccinations on children, using two tubes or two points taken from packages the remainder of which has been examined bacteriologically. The case is kept under daily observation and special attention is given to the character of the "takes." If any faults are discovered, especially bacteriologic contamination of a serious nature or a lack of potency, the facts are reported to the surgeon-general, who calls the attention of the manufacturer to them.

Vaccine has been examined in the laboratory almost continuously since early in the winter of 1901-2 and the following figures will convey an idea of the degree of contamination before the attention of manufacturers was directed to the large amount of contamination and since the passage of the act approved July 1, 1902. Vaccine virus examined during the winter of 1901-2 gave a general average of 4,698 bacteria per tube and 4,809 per point, the highest count for a tube being 30,080 and for a point 20,828. In the examinations conducted since the act went into effect the general average of the tubes has been 309, for points 1,223; the highest for a tube being 1,501, and for a point 8,860.

The following table shows the highest, lowest and the average number of colonies found in tubes and points in 1901-2 and in 1904. It will be seen that with only one exception the counts for 1904 were considerably lower than for 1901-2, this one exception being in a manufacturer whose product has always averaged particularly low in contaminating organisms and has given a high percentage of "takes."

TABLE COMPARING THE BACTERIAL CONTAMINATIONS OF VACCINE VIRUS BEFORE AND AFTER THE PASSAGE OF THE ACT.

Manufacturer.	Date.	Tubes.			Points.		
		High.	Low.	Average.	High.	Low.	Average.
A.—Before Act....	1901-02	17,000	86	2,498	15,760	13	2,463
After " ...	1904	1,501	12	462	546	133	271
B.—Before " ...	1901-02	7,274	192	3,896	20,828	4,923	10,708
After " ...	1904	374	3	131	8,148	38	1,243
C.—Before " ...	1901-02	2,440	111	1,166	13,030	847	4,358
After " ...	1904	535	86	213	2,690	642	1,459
D.—Before " ...	1901-02	4	0	1			
After " ...	1904	336	94	209			
E.—Before " ...	1901-02	30,080	11,840	18,443			
After " ...	1904	1,125	53	409	8,860	520	3,132
F.—Before " ...	1901-02	8,000	116	2,455			
After " ...	1904	484	49	229	270	21	90
G.—Before " ...	1901-02	18,404	1,414	6,819	12,800	1,530	6,098
After " ...	1904	1,242	8	373	380	42	149
H.—Before " ...	1901-02	3,819	369	1,875			
After " ...	1904	1,095	343	595			
General average							
Before Act...	1901—02	....	....	4,698	....	....	4.809
After " ...	1904	....	....	309	....	....	1,223

We can not but feel that this decided improvement has been due to the rigid inspection and control of the manufacture of vaccine virus by the federal government.

The first one to call attention to the contaminations of vaccine virus was M. J. Rosenau in his article read before the New York Academy of Medicine on February 20, 1902, and in his article entitled "Bacteriological Impurities of Vaccine Virus," published as Bulletin 12 of the Hygienic Laboratory, which showed that manufacturers were placing too much confidence in the germicidal properties of glycerin. But the results shown in Bulletin 16 of the Hygienic Laboratory[1] demonstrate that the germicidal action of glycerin is very feeble, and that pus cocci were able to live in the ice chest indefinitely. On account of the great demand for vaccine virus at that time manufacturers were without doubt placing the virus on the market very soon after removal from the calf and before it had been freed from its bacterial contamination.

While commercially it may be impossible to place a virus on the market that is absolutely free from microbial contamination, it is not too much to ask that no vaccine be placed on the market unless it is free from pathogenic cocci and other dangerous bacteria.

There is one point in the vaccine question that has, up to the present, had but slight attention from manufacturers, and that is the distribution of their product. As is well known, perishable food products are shipped in cold storage or under special conditions, and it would seem that with a substance so susceptible to the influence of temperature as vaccine virus, it would not be unreasonable to expect that similar care be taken in its distribution.

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[1] The Bacteriologic Impurities of Vaccine Virus; an Experimental Study. Hygienic Laboratory, U. S. Public Health and Marine-Hospital Service, Bulletin No. 12, 1903. The Antiseptic and Germicidal Properties of Glycerin. Ibid. Bulletin 16, 1903. See also on this subject: Dry Points Versus Glycerinated Virus from a Bacteriologic Standpoint. American Medicine, April 19, 1902, p. 637. Remarks on the Preparation of Vaccine Virus. Anderson, John F., Medical Record, March 12, 1904.

Respect.—If we would have our profession respected, we must respect it ourselves, by never speaking of it lightly, slightingly or in a deprecatory manner.—Williams, in *Journal of the Michigan Medical Society.*

THE ADVANTAGES OF EXPEDITIOUS SURGICAL WORK.

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Previous to the days of anesthetics and of aseptic surgery, operators strove to complete their work in the shortest time possible, and the results of skill in this direction were appreciated. Under the influence of modern methods of protection for the patient, there came a tendency to devote more time to detail in operative technic, and this sometimes degenerated into "puttering." It is quite as important for the patient to retain his natural resistance after operation as it is for the surgeon to add artificial means for securing asepsis during operation. Mr. Tait was the first prominent exponent of this principle, but the special reasons for his success were not understood in his day. We now know that infections are met by the cell resistance of the individual, and the better the general resistance of the patient, the better his special cell resistance. A patient usually retains a great fund of natural resistance during the first fifteen minutes of an operation, no matter what is being done; but he is usually depressed after an hour of operative procedure, even though the work be simple in its nature. It seems well, therefore, for us to make an attempt to approach as nearly as possible to the fifteen-minute standard of time in most of our surgical work.

The matter came up for discussion recently in a little group of surgeons, and I had my next dozen operations timed. Not one of the operations was done in the shortest time in which I have done any one of them previously; other surgeons would have been still more expeditious, and two of the operations required much more than the average length of time, but, on the whole, the list furnishes a very good illustration of the advantages of "getting in quickly, and getting out quickly" in surgical work. A common criticism is that important details may be neglected. That is a matter for the audience to decide, as all of these operations, except in the prostate case, were done in the presence of the class at the Post-Graduate Medical School. It is not desirable to operate against time, but it is worth while to make every move count, and to note, after all necessary things have been done, that the work was not unduly prolonged.

The following 12 cases are consecutive ones, with the exception of two or three minor procedures not worthy of classification.

The time recorded was the time from the beginning of an incision to the closing of the last suture; or, in cases without suturing, to the application of the last dressing.

Case 1.—Mr. R. L. C., aged 19. Interval appendicitis; appendix entirely buried among dense adhesions.

Operation.—Gridiron incision one and one-half inches long, removal of appendix and suturing of separate tissue planes of the abdominal wall with catgut.

Time.—Sixteen and one-half minutes.

Result.—Primary union and patient out of bed *on seventh* day.

Case 2.—Dr. H. E. C., aged 29. Gangrenous appendix; *old* and new adhesions.

Operation.—Gridiron incision one and a half inches long, removal of appendix and separate suturing of tissue planes with catgut. No drainage.

Time.—Twelve minutes.

Result.—Primary union and patient out of bed on the seventh day.

CASE 3.—Mrs. H. R., aged 31. Extrauterine pregnancy; patient apparently dying. Intravenous saline solution of about 3,000 c.c. was given before operation until pulse could be counted.

Operation.—Midline abdominal incision, many pints of blood and clots removed, oviduct removed; no drainage; tissue planes separately sutured with catgut.

Time.—Twelve and one-half minutes.

Result.—Primary union and patient out of bed on the fifteenth day.

CASE 4.—Dr. J. O. T., aged 60. Hypertrophy of prostate; bladder holding 20 ounces of residual urine; patient feeble.

Operation.—Removal of both lobes of prostate through perineal incision and insertion of Ferguson's drainage apparatus.

Time.—Five minutes for removal of the prostate and four minutes for application of drain and dressings.

Result.—Patient was out of bed on ninth day, but has pus casts with bacteria and will probably lose ground, unless flushing of the renal pelves with argyrol is to be effective. This was begun thirty days after operation, through catheters left in the ureters.

Susequent History.—Patient refused to have the pelves of the kidneys flushed through ureteral catheters daily, and he was placed on urotropin (hexamethylenamine). Excellent response was at once made, and he gradually improved to the point of being up and about the house, but died from the effects of an overdose of morphin two months and a half from the date of operation.

CASE 5.—Mr. F. K., aged 23. Osteoma of left superior maxilla involving vomer and ethmoid bones.

Operation.—Preliminary ligation of left common carotid artery and removal of superior maxilla and other bones through the classical incision.

Time.—About five minutes for the carotid operation, and about twenty-six minutes for the excision. Duration of anesthesia was forty-five minutes, as time was lost in getting out and preparing instruments, the need for which had not been anticipated. A most difficult operation of its class.

Result.—Primary union of all sutured structures. Patient was out of bed on third day after operation and is now having obturator applied by a dentist.

Subsequent History.—The obturator, which was made and fitted by Dr. F. L. Fossume, not only holds the cheek in normal form and allows of good articulation, but it carries teeth which restore the appearance and function of the lost maxilla.

CASE 6.—Dr. A. I. B., aged 33. Interval appendicitis, with one short adhesion band.

Operation.—Gridiron incision one and a half inches long. Eucain anesthesia. Removal of appendix, and closure of separate tissue planes with catgut.

Time.—Seven minutes.

Result.—Primary union. Patient was out of bed on third day, and gave a dinner to friends down town on the fifth day, against my approval.

CASE 7.—Mrs. R. R. D., aged 35. Extensive peritoneal adhesions, involving omentum, loops of bowel, and pelvic structures. Diastasis of rectus abdominis muscles following imperfect closure after a previous operation.

Operation.—Separation of all adhesions, and application of Cargile membrane for prevention of their recurrence. Dissection of sheaths of rectus muscles, and careful suturing of separate tissue planes. Patient was very adipose.

Time.—Twenty-three minutes.

Result.—Primary union excepting at pea-sized point. Patient was kept in a recumbent posture for eighteen days to avoid undue tension on abdominal wall.

CASE 8.—Miss K. S., aged 17. Dysmenorrhea due to cirrhotic ovaries. Extensive active acne of forehead and shoulders. Preputial adhesions.

Operation.—Decapsulation of ovaries, through midline abdominal incision. Circumcision.

Time.—Thirteen and one-half minutes.

Result.—Primary union. Acne had disappeared by fifth day leaving small dry comedones. Patient was out of bed on fifteenth day.

Subsequent History.—Decapsulation of the ovaries has not relieved the dysmenorrhea, but the acne, which had been a distressing feature of the case for several years, is now apparently cured.

CASE 9.—Mrs. T. L., aged 23. Extensive pelvic peritoneal adhesions. Perineum ruptured to second degree.

Operation.—Midline abdominal incision, separation of adhesions, conservative treatment of ovaries and tubes and application of Cargile membrane to prevent recurrence of adhesions. Repair of perineum by semilunar incision and suture of bulbo-cavernosus and levator ani muscles in median raphe.

Time.—Three and one-half minutes for the perineal operation, and nine minutes for the abdominal operation.

Result.—Primary union of abdomen and perineum. Patient was out of bed on seventeenth day.

CASE 10.—Mrs. F. L. F., aged 25. Extensive peritoneal adhesions of pelvis, including loops of bowel, omentum, and uterus and adnexa.

Operation.—Midline abdominal incision, separation of adhesions and application of Cargile membrane; removal of left ragged adnexa; conservative treatment of right ragged adnexa.

Time.—Fifteen and one-fourth minutes.

Result.—Primary union. Patient was out of bed on the seventeenth day.

CASE 11.—Mrs. E. M., aged 74. Carcinoma of right breast; patient was extremely adipose.

Operation.—Removal of breast, pectoral muscles, axillary and subclavicular glands and fat, which latter were firmly adherent to axillary vessels; buttonhole side drain for wick; the rest sutured.

Time.—Twenty-six minutes.

Result.—Primary union along the whole sutured line. Patient had been nervous about operation, and had been led by nurses and assistants to think that we had simply applied "massage under an anesthetic" and did not discover that an operation had been performed until a week later when the dressings were changed. She wished to get up two or three days after the operation.

CASE 12.—Mrs. C. M., aged 18. Tuberculosis of diaphysis and epiphysis of left tibia.

Operation.—Excision of knee.

Time.—Twenty-one minutes.

Result.—Wound granulating safely, two weeks elapsed.

Subsequent History.—There is new tuberculous invasion at the site of the excision, and the leg will probably have to be amputated.

With the exception of the cases of excision of the maxilla and of the knee, the instruments employed consisted usually of a pair of scissors, a needle, a single-hook retractor, and two pairs of artery forceps.

The object in using scissors in place of the classical scalpel is because there seems to be much less oozing of blood from small vessels, and because the number of instruments is lessened. The argument that primary union may not follow the use of scissors is answered well enough by these cases without reference to further statistics.

616 Madison Avenue.

Reflex Trouble After Cataract Operation.—P. de Obarrio of Panama writes to the *Anales de Oftalmologia* for April to call attention to a possible source for the congestion sometimes noted after extraction of a cataract. In about 100 cases he has frequently observed a mild transient hyperemia after cataract extraction, which yielded promptly to the usual measures. In certain instances, however, the congestion was more severe, and proved rebellious to all treatment until a carious tooth in the upper jaw was extracted, when the condition returned at once to normal. In all such cases the teeth should be carefully examined.

TREATMENT OF PSORIASIS BY THE GENERAL PRACTITIONER.*

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In a former article[1] I described a new ointment, which I have used very successfully in the treatment of psoriasis. It consists of:

℞. Acid. *salicylic* ....ʒiiss 10
Chrysarobin
Ol. *rusci (birch tar)*, āā..................ʒv 20
Sapo. virid.,
Vaselin, āā........................ʒviss 25

This ointment contains keratolytic reducing as well as macerating and antipsoriatic remedies in rather large doses. The combination of sapo. viridis and chrysarobin represents, I believe, *an original* feature in this application.

During the last two years I have treated a great number of psoriasis patients with this ointment, but I do not intend publishing reports of these cases, as the process of recovery was nearly identical in all. The treatment is as follows:

For *from 4 to 6 days the ointment is* applied by the *aid of a stiff* brush *to the* affected area (after this has dried somewhat it is well to apply a little starch or zinc powder). On the fifth or sixth day the patient starts taking *hot* baths daily for from one to three days, *and* after the bath vaselin is to be well *rubbed in from* one to three *times* a *day*. This *course* of treatment, which *embraces* a period of eight days, may be repeated several times, according to the severity of the disease, but as a rule the psoriasis patches disappear soon after the first *treatment*.

During treatment, the appearance of the lesion is as follows: One or two days after the *application* has been begun, it will be observed that the ointment remains on the *normal* skin immediately surrounding the patches of psoriasis as a black parchment-like crust of the thickness of a piece of paper, whereas over the affected areas *the ointment* does not stick but *rather causes a powerful* scaling of the entire plaque. Wherever psoriasis exists in any shape, from the simple feeling papula to the formed scale-covered plaque, an intense feeling takes place. It is my opinion that the ointment, according to the different effects on normal and diseased skin, as *described above, acts as* an indicator for all areas of psoriasis.

The black crusts which become closely adherent after five or six days' *treatment gradually* loosen after a few days of bathing, and inunction with vaselin or with zinc sulphur ointment.

The difference between this *ointment* and other chrysarobin *ointments* is that it possesses the property of limiting the chrysarobin irritation almost completely to the diseased area with hardly *any damage* to the neighboring skin.

Every physician is acquainted with the diffuse staining caused by chrysarobin, *which often* gives the patient the appearance of an Indian, but my ointment remains, with but few exceptions, limited to the area of application.

In my first publication I mentioned the satisfactory results that I attained by this method of treatment. Since then, Professor Lassar[2] has expressed the same opinion. He says:

> I have given the combination of salicylic *acid* with chrysarobin, tar, soap and vaselin, suggested by Dreuw in the *Monatsschriften fuer praktische Dermatologie*, a thorough trial since March on *300 patients, and am* pleased to state that the results were entirely satisfactory. The irritation caused by the chrysarobin, with but few exceptions, *remained absent*, and in the few cases the inflammation was *more moderate* than is usually found after treatment *with* chrysarobin. The ointment forms a thick black crust *on the* diseased area, and over these areas the ointment can be applied again and again, while the *tar treatment* can be carried on. Gradually the crusts peal *off and, instead of a* psoriasis plaque, there remains, as a rule, an area normal in appearance and difficult to distinguish from its healthy surrounding, though now and then an area for a time will assume a paler shade which soon disappears. Dreuw's method has proved itself to be so free from irritation and yet so efficacious that I have used it without *exceptions on all my* patients and consider it superior to all others *as regards* the ease with which it can be handled *and the promptness* with which it cures; and also because *it is* well adapted for an after-treatment which can be *carried on* by the patients themselves *without* any *danger. Having* had good results in the treatment of psoriasis by means of soap ointments, peeling cures and tar preparations, I was at once inclined *to place* considerable faith in this combination of *useful remedies*, and the addition of salicylic acid *seems to add materially* to the general activity of the *ointment. This combination* can also be used *instead of Wilkinson's ointment in the treatment of prurigo, pruriginous infiltrations* and old chronic lichen rubra. It is *almost* odorless, has the consistency of ordinary ointment, yet the essential advantage lies in its power of *impregnating* and peeling the diseased area simultaneously. Taking it all in all, this method is a very desirable acquisition to our therapeutics and will be found deserving of the gratitude of all practitioners using it.

In recognition of the good results in the clinic of Professor Lassar and my own private practice, I feel justified in recommending this method to every general practitioner on account of its simplicity and of the ease with which it can be carried out in general practice. The patient should wear old underwear and outer clothing, and should make only the most necessary changes during the entire treatment.

I take pleasure in complying with Dr. Unna's request to state that the results gained by my method of treatment at his clinic as well as at his polyclinic correspond entirely with those *at the clinic of Professor* Lassar.

In order to obtain the best effects the solid constituents of the ointment must be thoroughly rubbed, so as to produce a uniformly fine ointment. For prolonged use, I prepared a material called mull with this ointment and found its application so free from all irritating qualities that I was enabled to place it on the forehead immediately above the eye in adults as well *as in children and to* leave it *in situ* for from three to four days without producing any deleterious results. The use of this ointment and mull is not limited to psoriasis, but can be extended *to other conditions* in which a special macerating process is desired with the smallest possible amount of irritation. I have used it thus in trichophytosis and in local circumscribed dry eczema, and it can be kept on for from six to eight days, after which any mild ointment may be applied.

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* From Dr. Unna's dermatologic clinic, Hamburg.

[1] Monats. f. praktische Dermat., vol. xxxiv, 1903, p. 508. See also THE JOURNAL, xliii, p. 233.

[2] Zeitsf. Dermat., vol. x, part 51, p. 560.

Alcohol from Peat.—*Meyer Brothers' Druggist* states that alcohol is being made from peat in Russia, and that it is hoped to make the product sufficiently cheap for use as fuel.

WHAT IS DYSPEPSIA?*

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Dyspepsia is difficult digestion and may include all forms of disturbances associated with the digestive process. Normally we are not aware that digestion is going on. When sensations are experienced we have dyspepsia.

The ancients sought knowledge through the avenues of philosophic reasoning—the dream of ideas—but in modern methods we gain knowledge by experience of phenomena. What is dyspepsia? We all know, at least empirically, what it is. We were early taught by childish experience with unripe fruit. It has been facetiously stated that the apple which Eve gave to Adam was green, and that it caused indigestion. If we would gain a scientific knowledge of dyspepsia we must study the process of normal conditions and trace the pathologic changes that occur.

From time immemorial dyspepsia has been a national as well as an individual problem. Nations do not begin to decline until they have reached the stage of luxury; then their appetite becomes abnormally developed by overindulgence. The inhibitory power is weakened by degrees, and every nation that climbs into the lap of luxury crumbles through the indigestion of the individual. It was at a great feast that Belshazzar read the handwriting on the wall that foretold the fall of Babylon. The Greeks forsook the simplicity of the heroic Spartan life to indulge in the splendor of Grecian prosperity. Not even the philosophy of Socrates, of Plato or of Aristotle could curb the evils of luxury. As their minds leaped wildly into "absolute infinitude" for the solution of the problems of life, despairingly they fell back into the death grip of dyspeptic gluttony. Rome did not begin to die until her feasts were spread.

In our own land the Puritans were obliged in the beginning to live on simple fare, but, with the advent of prosperity, luxurious tastes developed. New England is responsible for the mince pie, the pork and beans, the doughnuts and the hot biscuits washed down with ice-water, which have become a national dietary. These New England dishes compose the chief menu of the quick lunch counter, which simulate pig-troughs to which busy men run, bolt down a hasty lunch of gastric irritants and return at once to business. This overworks the stomach and results in gastric fatigue, which is serious in its ravages on general health. Man does not succumb so often from overwork of the brain as from overwork of the stomach. Even a gathering of medical men, where the apostles of Hygeia assemble to obtain food for the mind, often resolves itself into a dyspeptic-producing feast. The chef and housewife are ignorant of the laws of dietetics, especially that pertaining to the composition and preparation of food. The agricultural department teaches farmers how to feed their hogs and cattle. Should we not prescribe rational diet for our patients?

Recently we have had a visit from the French apostle of "Simple Life," Wagner, who came to interpret the handwriting on the wall that predicts disaster to a badly overfed nation. Overindulgence of the appetite is not confined to the wealthy; the poor peasant of Europe, as soon as he reaches our opulent shores, falls into the evils of indigestion. Finding here lucrative employment and comparative luxury, he becomes the victim of dyspepsia. Whatever may be said of the vices that are dependent on luxury, it is certain that none of them have more immediate, far-reaching or more fatal effects on individual and national power than overindulgence of the appetite. With better knowledge of the physiology of digestion, of the laws of dietetics and of the pathologic changes resulting from departure from these laws, we may correct the evils and prevent the destruction of individual and national health.

PHYSIOLOGY OF DIGESTION.

For the consideration of the physiology of digestion the stomach is divided into two portions—chemical and mechanical. The chemical division is located in the cardiac portion and the mechanical in the pyloric end of the stomach (antrum of the pylorus).

The cardiac area contains the secretory apparatus, and the peptic glands are chiefly found here. HCl is secreted not in the pyloric, but in the middle portion of the stomach.

The pyloric end, while containing some peptic glands, is chiefly concerned in the mechanical work of the contracting muscle. The energy of each contraction wave is directed on the contents, assisted by the resistance of the walls of the stomach and by the constricted pyloric orifice.

The greater part of the stomach contents remains in the cardiac or chemical portion for some time (from one to two hours) in a more or less quiescent state.

The carbohydrates (starch) are acted on by the ptyalin from the saliva, while the proteids, such as meat, are digested by HCl and pepsin secreted by the gastric glands (proteolysis). As HCl is constantly poured out, it checks the action of the ptyalin on the starch. The food mass resting quietly in the cardiac end is attacked first on the surface by the HCl and gastric ferments, which gradually penetrate until the food is more or less saturated. As the mass becomes softened, it reaches the pyloric end of the stomach through the pressure exerted by the tonus of the muscle of the cardiac end, aided by feeble and slow contraction waves occasionally seen in this portion of the stomach. On reaching the pyloric section (antrum of the pylorus) the contents are met by the powerful contractions of the muscle walls which break up the mass, forcing the liquid portion toward the pyloric orifice, the more solid part remaining in the body of the stomach. The pyloric valve relaxes and the rapid waves (one every 15 to 30 seconds) eject the softened semifluid contents out through the open pylorus into the duodenum, and spurts at regular intervals force the contents in jets into the duodenum. This is observed in dogs with the open abdomen. By resecting the duodenum close to the pyloric orifice, the stomach contents spurt a distance of from 8 to 12 cm. against the sides of the trough.

Secretion and motility are two essential factors of digestion and they depend for their action on different forms of stimuli. The sensitiveness of the secretory apparatus responds to odor and the taste of food and is so delicately arranged that the olfactory nerves and nerves of taste carry impulses to the glandular structures that call for the specific secretion adapted for the digestion of the particular kind of food that is to enter the stomach. Thus, at the smell or taste of food the mouth waters, and ptyalin is mixed with the starch and the pancreatic glands are excited into action. Even through the pylorus into the intestines. By lavage we attempt the removal of mucus, exfoliated epithelial cells and food detritus that adhere to the mucous membrane. The ordinary method of lavage is the introduction of water through a single tube into the stomach and allowing the water to syphon out again. The single stomach tube through which the water passes into the stomach must have openings sufficiently large to allow the fluid to return through the tube with a flow equal to that with which it entered. With such a tube there is not sufficient force of the inflow to dislodge the mucus and detritus from the stomach wall.

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* Read at the annual meeting of the Tennessee State Medical Association, at Nashville, 1905.

Another important value that is attributed to the use of lavage is the stimulating effect of water projected against the stomach wall, producing a sort of percussion effect mechanically to excite peristalsis and the circulation of the glandular structure of the stomach. Malbranc[9] and Rosenheim attempted to employ a gastric douche by having the tube made with minute as well as with large openings at the end and by elevating the irrigator to obtain the force of gravity. This was termed a stomach douche. This fails to accomplish the purpose, because if the openings of the stomach end of the tube are made small enough to obtain the necessary force and velocity for the fine jets or streams projected against the mucosa the water can not siphon off readily. and, therefore, the return flow is cut off. If the openings are large or one large and several small openings. the force of the inflow is lost, the pressure falls and the object of the douche is defeated. To obtain the desirable advantage of lavage and douche with a single apparatus, we may employ a double tube, one small caliber tube for the inflow attached parallel to a large-sized tube for the outflow, in proportion something like the old-fashioned shotgun, with ramrod alongside the gun barrel, the ramrod representing the small or inlet tube and the gun barrel the outflow; this has an opening of as large a caliber as the largest single stomach tube. This arrangement more readily conforms to the anatomic shape of the esophageal opening, which is oval (not round), flattened in the anterio-posterior diameter. The double tube. being somewhat oval in shape, is more easily introduced into the stomach and is more agreeable to the patient than the round single tube. My double stomach tube is so constructed that the end of the smaller inlet tube reaches to the upper portion of the stomach, just beyond the cardiac orifice, and is perforated with small needlelike openings. while the larger or outlet tube extends to the greater curvature or floor of the stomach, with large end and side openings to allow free outflow of the stomach contents. The advantage of this arrangement is readily seen when put into use. The water passing down through the smaller tube under high pressure is projected with considerable force and velocity in a fine jetlike shower against the upper and lateral walls of the gastric mucosa, and the water. as it reaches the floor of the stomach, passes immediately out of the stomach through the large outflow tube, thus thoroughly cleaning the wall as well as the lumen of the stomach and imparting a powerful invigorating stimulation which is of decided advantage in secretory and motor disturbance of the stomach. As all the portions of the stomach can be reached by this method, it is of decided advantage when local medication is desired. To obtain the necessary pressure to force the water in a fine shower as a gastric needle douche, the irrigator may be elevated or, what is better, the air may be compressed above the water; this will force the water out, the degree of the force and velocity, of course, depending on the amount of pressure used.

In severe forms of gastritis with thick mucus adhering to the stomach walls, and with a sluggish condition of the local circulation and an atonic state of the stomach not relieved by lavage, it is necessary to resort to some other mechanical means of cleaning and stimulating the stomach. The removal of the contents free in the stomach is easily accomplished by lavage, but in the more advanced forms of gastric disease the irritating substances in the stomach are not free but are adherent to the walls of the stomach, as can be observed in postmortems.

The problem has been how to obtain a practical method of removing this tenacious mucus and other material from the wall, of stimulating the motor and secretory apparatus and of exciting the sluggish circulation. Water, however forcibly introduced into the stomach, will not always dislodge the accumulations. Even postmortem it is difficult to remove the mucus with a forcible flow of water on the mucous membrane under the faucet. If a small stomach tube is turned or revolved while in the stomach the mucus will adhere and form around the outside of the tube, and if the turning be continued and increased in rapidity quite a large amount of mucus can be removed in this way. At the same time a stimulating massage and vibratory effect is imparted to the gastric wall. If a flexible cable is inserted within the small tube so that the tube fits close to the cable it renders the procedure much more effective. The spiral end of the cable is covered with cotton or wool over which is slipped a thin rubber finger cot, which renders the apparatus easier to introduce and less injurious than the open end of a stomach tube, which often has comparatively sharp edges. When this apparatus, known as the gyromele, is encased in a short outer stomach tube introduced into the stomach, the outer end is turned by an apparatus like a surgeon's drill. The value of the procedure is chiefly found in those refractory cases that do not yield to treatment by lavage, diet, drugs, electricity or mineral springs. In the progress of treatment the improvement, such as retraction of a dilated stomach, can be noted from time to time by palpating the revolving sound through the abdominal walls.

In certain forms of gastric dyspepsia, with atony of the stomach and sluggish circulation, the mucus accumulations may not appear so evident and cleaning out of the stomach is not indicated; in fact, to use lavage in such cases only seems to increase the trouble. The patients grow thin and weak from the result of lavage in that, as previously stated, the secretions, peptones and albumoses delayed in the stomach are also washed out. Even if lavage is performed when the stomach is empty (which is seldom the case), the water coming in direct contact with the mucosa acts as an irritant; especially is this noticeable in cases of hyperchlorhydria. After a few treatments, lavage, therefore, must be abandoned, but lavage, as we know, mechanically stimulates the stomach by the stretching on introduction of the water and the retraction after its withdrawal. If a similar procedure is carried out at frequent intervals. without the great detrimental effect that we obtain from washing out the gastric cavity, we may obtain the valuable results of regular exercise of the stomach and of the heat of the water acting on the circulation. This can be accomplished by attaching a small, thin intragastric bag which may be rapidly distended, and then its contents rapidly withdrawn, thus obtaining a high degree of mechanical stimulation and the physical effects of heat. This can be repeated frequently without injury to the stomach or danger to the patient.

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[9] Berl. klin. Wochftchr., 1878, No. 4.

In cases of marked dilatation due to atony of the gastric musculature, the water seeking the deepest portion of the stomach causes the stomach to sag downward. Even a pound weight seems excessive for a weak stomach and as water is non-compressible it does not promptly excite peristalsis of the stomach, just as in atony of the bowel enemas frequently increase the trouble rather than correct the constipation. To overcome this difficulty we may introduce air into the bag within the stomach instead of water. This inflation distends the stomach in all directions. The stomach on inflation rotates forward and upward; this lifts up the stomach instead of bearing it down as when water is used. As the air can be released promptly, it causes rapid retraction of the stomach. Frequently repeated, this procedure excites peristalsis and restores the motor function of the stomach.

In most cases the intragastric bag can be dispensed with and the air may be forced directly into the stomach, moderately distending it, and then allowed to escape through the tube. This direct method is very useful when we wish to apply heated vapor to the mucous membrane. Local medication can be added. Volatile antiseptics and stimulants such as menthol and oil of cloves can be put in a bottle containing water heated to a temperature of from 55 C. to 60 C. (131 F. to 140 F.) Compressed air is then passed through the water and the medicated vapor is forced through the double tube into the stomach. This procedure constitutes a pneumatic gymnastic or exercise of the stomach.

Electricity.—Much has been written on the use of electricity in gastric disease. but there is no certain data that either the faradic or galvanic current has any effect in exciting secretion or motility of the stomach. Experimentally, electricity has no effect on the stomach, and clinically it is an open question.

Diet.—No method of treatment can be entirely successful without an intelligent system of diet, adjusted to the requirements of the individual case. If the stomach is already irritable this condition should not be augmented by giving irritating foods. Bouillon and beef tea or beef juice should be avoided in cases of hyperchlorhydria and other irritable states. When meat is prescribed, the extractives first should be removed and discarded. When the stomach is in a state of atonic dilatation the food should be finely divided by chopping or grinding. In some instances it may be necessary to give meals at frequent intervals, while in other cases, when the stomach is slow in expelling its food, sufficient intervals should be allowed between meals to allow the stomach to empty itself. The activity of the stomach should be determined by frequent examinations during the course of treatment, bearing in mind that this is one of the most important factors. In cases of sluggish bowel with constipation, bran may be prescribed with most excellent results; half a cupful of wheat bran with either hot water or milk may be given once daily.

Drugs.—The more closely we study the pathology of gastric diseases the less do we find drugs to be indicated. Aside from the treatment of symptoms, such as hyperacidity with alkalies and hypoacidity and hypopepsia with HCl and pepsin, there is but little real value in drug medication in these conditions. Antiseptics are apparently efficacious but the entire object of treatment in these cases is to produce normal conditions of the stomach in which autoantiseptics are produced and autoseptics take place, hence antisepsis by drugs is unnecesary.

Tonics such as nux vomica or its alkaloid strychnin are generally recommended to tone up the muscle of the stomach. According to my experiments on dogs, these drugs have no effect on the motility of gastric muscle, and this is confirmed by clinical experience. It is an error to prescribe drugs that may irritate the stomach without the certain knowledge that they will produce beneficial results.

Surgery.—In complete mechanical obstruction of the pyloric orifice, an outlet for the stomach must be reestablished by surgical interference, and, likewise, in certain cases of ulcer of the stomach, relief may, be obtained by surgical means. Dyspepsia due to atonic dilatation (fatigue of the gastric muscle) as well as catarrhal conditions do not require surgery.

After a number of years of clinical experience I have found that the methods of treatment outlined above are the most rational and effective means of permanently restoring to health a large variety of dyspeptic cases suffering from chronic gastritis and from atonic dilatation of the stomach.

PUERPERAL ARTHRITIS.[*]

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The following case of puerperal sepsis is presented for consideration:

History.—Mrs. X., aged 20, primipara, with a history of gonorrhea a few months earlier, was delivered on June 9, no unusual features characterizing the labor. On the third day following delivery she complained of a chill and the temperature was found to be 101 F. With a slight morning remission, the temperature continued to rise until 105 F. was recorded on the third day. I first say the case at this time.

Course of the Disease.—For five weeks the temperature ranged between subnormal and 105, on July 20 becoming normal and so remaining for five days. At no time during the illness was there evidence of much pain or tenderness about the uterus and appendages, the predominant and alarming feature being a profound exhaustion. On July 25, the patient complained of tenderness in the left shoulder and elbow; temperature was 101 F., and continued to rise to 102.8, the pain localizing itself in the opposite elbow, followed successively by involvement of the left wrist, left knee, right wrist and right knee. All these joints became swollen, puffy and exquisitely painful, the patient complaining of the slightest touch and presenting unquestionable evidence of great suffering. The joints showed the usual and typical appearance of an ordinary arthritis.

Treatment.—The salicylates were prescribed but proved ineffectual from failure to retain them. The pain was controlled by morphia and the affected parts were wrapped in raw cotton. Although still painful, improvement followed, the temperature becoming normal on July 30.

It is to this local evidence of sepsis, as manifested in the involvement of the joints, that I call attention especially.

Inflammation of the joints occurring in childbed was noticed as early as 1852 by Charcot. The following year, Sir James Y. Simpson of Edinburgh, whose broad observation seemed to have grasped every detail of midwifery, drew attention to this interesting condition, and he was followed later by numerous writers, chiefly of the French school, all of whom united in describing the condition as puerperal rheumatism. That the subject was considered an important one, is evidenced by the many papers on record and the care and attention devoted to a description of the cases cited. Celles, whose doctorate thesis before the French Academy was published in Paris in 1881, gives several cases occurring under his observation in which the disease developed after confinement or as an accompaniment or sequel of some diseases of the reproductive organs. As the result of his studies, he eliminated cold and exposure as causative agents, both of which up to that time had been regarded as potent factors in the production of rheumatism. He noted the fact, however, that, in all cases, fever and a general constitutional disturbance accompanied or preceded the development of the arthritic symptoms. It must be remembered that in 1881, the year in which Celles published his essay, bacteriology was in its infancy and, as a consequence, modern pathology was unknown. Puerperal sepsis, as an infectious disease, due to the presence within the body of bacteria which, by their activities, produced changes of a local or general inflammatory character, was not understood. He, therefore, joined with his predecessors in describing the inflammation of the joints occurring after confinement as puerperal rheumatism, a view which to this day still holds, as may be seen by referring to some of the recognized authorities on obstetrics. Hirst[1] says that arthritis occurring during the puerperal state is either a local manifestation of septic infection, or else, as a rheumatic arthritis, is simply an accidental intercurrent affection. He also states that the diagnosis between septic arthritis and simple acute rheumatism is not always easy, and that there may be very little evidence of general septic infection, as the arthritis may make its appearance late in the puerperal state, and may be accompanied by very moderate fever of an irregular type. It is more apt to appear in women who have had gonorrhea. Edgar, in discussing the symptoms and diagnosis of puerperal septic arthritis, says that the diagnosis presents little difficulty, although the condition has been mistaken for acute articular rheumatism.

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[*] Read at the meeting of the Clinico-Pathological Society, 1905.

It is apparent, therefore, that an arthritis occurring within or shortly after the puerperium has been recognized as one of two forms, namely, either a local manifestation of a general septic condition or else an inflammation of a distinctly rheumatic character with no apparent relation to a condition of sepsis. It will be observed that the graver forms of the disease, leading to suppuration and probable ankylosis of the joint, are considered septic, while the milder forms, in which the inflammation subsides after a few days, leaving no permanent traces of its presence beyond a slight tenderness, have been classed as rheumatic or non-septic.

I venture to express the opinion, with due respect to the eminence and authority of the writers previously quoted, that this view is erroneous; that the distinction between sepsis and rheumatism is only apparent and not real; that all cases of arthritis occurring during the puerperium (excluding those due to external injuries, traumatisms, etc.) are septic, and, further, that a puerperal arthritis should be so recognized and so treated.

To establish the truth of this position involves an inquiry:

First, into the conditions, specific and general, which may lead to the development of an arthritis.

Second, into the relationship, if any, which may exist between these several productive or causative agents.

A non-traumatic arthritis occurs in many different diseases. In view of its prominence as a symptom in rheumatism, its presence is oftentimes considered a proof of rheumatic origin, in spite of the well-known fact that an arthritis in itself is not necessarily rheumatic and, further, that an arthritis is not a necessary accompaniment of rheumatism. The worst cases of rheumatism in many instances have been characterized by few, if any, symptoms of the joints. An arthritis may develop during the progress of any of the acute febrile diseases, especially those of bacterial origin, such as scarlet fever, typhoid fever, gonorrhea, puerperal septicemia. The presence within the blood of any active bacterial agent is sufficient to produce an inflammation of the joints, provided the infective agent is one which has an especially destructive power for serous surfaces, or that the condition of a particular joint or joints affords a favorable nidus for the localization of the germs. In childbirth, an especially good field is afforded for the infection of the patient in consequence of the continuous and far-reaching extent of the genital canal, as well as the bruising and lacerations of the soft parts incidental to delivery, especially if the necessary measures to prevent infection are neglected or impossible of execution.

In a series of investigations conducted by Krönig to establish as far as possible the identity of the particular germs most frequently found in cases of puerperal sepsis, out of a total of 179 cases 75 were found to be due to streptococci, 4 to staphylococci, and 50 to the gonococcus. Whether an arthritis has followed an infection from the streptococcus pure and simple I am unable to state from actual observation. There remains, however, no question as to the effects of an infection by the gonococcus. In innumerable cases, puerperal and non-puerperal, the presence of this germ has been demonstrated not only in the joints but in many other portions of the body, its presence always serving as an exciting cause for varied and profound changes. These cases of infection were formerly designated gonorrheal rheumatism, through ignorance of the real nature of rheumatism and a failure to comprehend the extensive and all-embracing character of a gonorrheal sepsis.

Our present views on the subject are well expressed by a writer in a recent number of the *Lancet*, who states that to the original idea of gonorrhea as a purely local disease with acute and possibly with chronic manifestations also of a local character, is now being added that of a general malady, sometimes having an acute septicemic or pyemic character, at others producing important inflammatory lesions in many different forms, and that practically no tissue can claim immunity from attack. In women with a history of recent gonorrhea the chances of an acute and general infection are many, and Jewett says that the gonococcus is the only pyogenic coccus which can live and thrive in the vaginal secretion, and further, that the organisms persist in the crypts of the cervical canal, where they live as parasites and simply find more suitable conditions for development in the first few days of the puerperium.

Theories regarding the etiology of rheumatism have been as numerous as they are varied. Cold and exposure, its relation to gout, and to excess of acid in the blood, especially the lactic-acid idea, were all at one time or another considered potent factors in the origin of rheumatism. To-day, we consider rheumatism an acute infectious disease, presenting as it does all the forms of such a disorder. This theory has its origin in the investigations of bacteriologists who have united in saying that there exists in the blood of rheumatic subjects a micro-organism which is described as the *Micrococcus rheumaticus.*

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[1] Text-Book of Obstetrics, 1898, p. 629.

According to Walker,[2] rheumatism in its character of an acute illness presents all the stigmata of an attenuated septicemia. In 1875, Klebs detected micro-organisms in cardiac valves which were affected with rheumatic valvitis, and Popoff, in 1887, obtained cultures from the blood of rheumatic subjects which on inoculation gave rise to pericarditis, endocarditis and arthritis. Many organisms were found, all different, and the tendency was to regard rheumatism as an infection by attenuated pyogenic staphylococci or streptococci; while certain features were attributed to a mixed infection. Walker, whose investigations have been thorough and complete, says that he believes in a specific organism, having found it present in 15 cases. This organism is described as a tiny micrococcus arranged in chains or pairs.

He says that it is a culture indistinguishable from an ordinary streptococcus and, further discussing its identity, states that at any rate it may, with reason, be affirmed that a micro-organism, morphologically and culturally indistinguishable from a streptococcus, is constantly associated with rheumatic lesions and is the only lesion so associated. Gustav Singer says that it is impossible to establish the specific character of an organism which is indistinguishable from an ordinary pyogenetic streptococcus and, therefore, holds that the infection of rheumatism is due to an attenuated streptococcic septicemia.

The recognition of rheumatism as an acute infectious illness of a septicemic character places it in the same class with all other diseases which have been found to have a bacteriologic basis. Sepsis requires but two conditions for its development: a favorable soil, and an infective agent. In puerperal septicemia, these two essentials are present, as the condition of the birth canal after labor affords an ideal soil for the implanting of infected germs. It makes no difference which germs may cause the infection, whether the ordinary streptococcus which Jewett found to predominate in his cases, the staphylococcus, the gonococcus or the *Diplococcus rheumaticus,* the result is the same, namely, a septic infection, and it should be so recognized. An arthritis occurring during puerperal sepsis and forming a part of the infective process, may be due to the gonococcus, to the particular germ of rheumatism or any other germ or group of germs, which by their presence in the body generate a poison sufficiently severe to affect the joints; but to speak of an arthritis following labor and occurring during the puerperium as septic in one instance because of certain gross and superficial characteristics and as rheumatic or non-septic in another instance, is to fail to grasp the real nature of rheumatism and to restrict puerperal sepsis to narrow limitations altogether unwarranted by facts. The attempt to draw a distinction in diagnosis between a septic arthritis and a rheumatic or non-septic arthritis based on symptomatology and clinical observation is illogical and unsatisfactory. In reality, the distinction is purely one of degree and not of kind. The recognition of all forms of arthritis, whether single or multiple, suppurative or non-suppurative, as sepsis in varying forms, is perfectly consistent with facts so far as ascertained in puerperal infection. Commonly three forms of sepsis are recognized: Sapremia, or septic intoxication; septicemia, or true sepsis, and pyemia, the stage of suppuration. The first mentioned either disappears or develops into true septicemia. In this form of infection, an arthritis may develop in one joint or more; it may be a matter of a few hours or days. Should it pass into the stage of suppuration it becomes pyemia and differs in no particular from a pyemic abscess occurring elsewhere. In pyemia, the immediate cause of localized infection are small particles of infected material, oftentimes small emboli. I think I can not do better in conclusion than to quote the language of Winckel[3] on the subject of infections of the joints.

> Very often (21.6 per cent.) we also find inflammations and suppurations in the articulations, especially in the shoulder, elbow, wrist, knee, hip, sternoclavicular and pelvic joints. The synovial membrane is usually thickened and reddened; the cartilage appears unchanged or slightly opaque; sometimes the cartilage becomes necrotic and may be followed by caries of the bone with external perforation of the pus. In 22 per cent. of the cases numerous abscesses of the muscular or cellular tissue occur; they usually spring from the muscular connective tissue. The frequent occurrence of miliary abscesses proves that in this form of puerperal pyemia we have to deal not with the wedging of large masses, but with finely divided molecular substances. The metastatic inflammation of the joints, the pleural cavities, etc., indicate that the infectious material is often carried to the infected regions in a finely divided form.

In other words, an arthritis may be set up by any one of the numerous infective germs, which may be comparatively mild and subside within a few days, the joint being the seat of inflammation, but not of suppuration. On the other hand, the infection may be of so intense a character as to produce suppuration early, or later by the deposition within the articulation of small infected emboli or particles. The changes thus set up are septic in character and constitute a true sepsis.

THE SEQUENCE OF THE PATHOLOGIC CHANGES IN APPENDICITIS.

A STUDY OF THE SIGNIFICANCE OF THE LESIONS FOUND IN DIFFERENT STAGES OF APPENDICITIS, BASED ON THE PATHOLOGIC FINDINGS IN A SERIES OF OPERATIVE CASES.

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Within recent years much has been written concerning the pathology of appendicitis. The anatomic characteristics of the different varieties of appendicitis, together with the secondary lesions accompanying the primary appendiceal inflammation, have been most carefully described and abundant statistics dealing with the relative frequency of the different types of appendiceal and periappendiceal lesions exist. In spite of all this accumulated knowledge, the subject of the pathology of appendicitis is not by any means a closed chapter, but continues to be prominent in medical discussions and literature. The reason for this, perhaps, may lie in the fact that it has not yet been generally recognized that the different pathologic conditions, as they are encountered at operation in cases of appendicitis, represent, for the most part, simply different stages of an inflammatory process involving primarily the appendix and accompanied, in a large proportion of cases, by a more or less extensive secondary involvement of the peritoneal cavity. Most of the studies dealing with the description and classification of the different pathologic varieties of appendicitis are based on a study of the lesions without reference to the duration of the symptoms previous to the observation of the pathologic condition and for this reason such studies throw little light on the pathologic history of the disease.

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[2] Practitioner, London, 1903, p. 185.

[3] Edgar's translation, chapter on "Venous Thrombosis and Pyemia," p. 817.

A study of the pathologic history of appendicitis resolves itself into a study of the processes of inflammation and repair as they occur in this disease, and a knowledge concerning the progress of these processes can best be obtained by a combined clinical and pathologic study of a sufficiently large series of cases, tabulating the pathologic findings according to the time which has elapsed between the onset of the attack and the observation of the pathologic condition. When the lesions are studied in this way, there is found to exist a striking general uniformity of the microscopic appearances at each of the succeeding periods following the onset of symptoms. This uniformity in the microscopic appearances exists in spite of decided variations in the gross appearances of the appendices, and the fact that the microscopic features prominent at one period may be either increased or diminished in preceding or in subsequent stages, shows that we have to do with a continuous process and that it is probable that the majority of cases presenting the characteristic lesions of patients operated on on the tenth day would, seven days earlier, have presented the lesions characteristic of the third day. The results of such studies, therefore, should serve not only as a basis for a knowledge of the pathologic history of the disease, but should aid also in the diagnosis of the probable lesions existing at any given period during the attack.

OBSERVATIONS OF CASES.

The following observations are based on a study of the condition of the peritoneum as found at operation in 485 cases of appendicitis[1] occurring at the Albany Hospital during the past six years, and of the condition of the appendix in 188 of these cases, the descriptions and sections of which are on file in the Bender Laboratory. The pathologic findings in this series of cases were studied with special reference to the relations existing between the character of the lesions and the stage of the disease.

In summarizing the results of the observations in this series of cases, those cases operated on during the first, second, third, fourth, fifth and sixth days of the attack are considered in separate groups for each day. Those cases operated on from the seventh to the tenth, from the eleventh to the fifteenth and from the sixteenth to the thirtieth day are considered in three corresponding groups; while all cases operated on one month or more after the occurrence of a definite attack are considered as a separate group.

The following is a summary of the more striking features of the pathologic process:[2]

First Day Group.—This was made up of ten patients operated on during the first twenty-four hours following the onset of symptoms. In two cases (20 per cent.) there was a seropurulent intraperitoneal exudate without perforation of the appendix. In one other case, the omentum was adherent by a fibrinous exudate to a gangrenous appendix. The gross appearances of the nine appendices studied histologically varied greatly. Two showed plainly visible gangrenous areas, one was described as normal, while in others the only macroscopic evidence of disease was a congestion or slight opacity of the peritoneum, with a swollen or hemorrhagic mucosa.

In sharp contrast to the often apparently insignificant gross lesions is the microscopic picture, which is essentially similar in all cases and consists of an intense, diffuse, polynuclear leucocytic infiltration with focal areas of hemorrhage and necrosis involving all coats with a more or less extensive destruction of the mucosa and, in many cases, a fibrinous or fibrinohemorrhagic exudate on the peritoneal surface. One of the most striking features in these cases is the presence throughout the majority of the sections of numerous areas of necrosis. These areas are larger, but are not more numerous in those cases which show macroscopic evidences of gangrene.

Second Day Group.—This was made up of twenty-three patients operated on during the second twenty-four hours following the onset of symptoms. Eight (34.8 per cent.) of the cases in this group were accompanied by intraperitoneal fluid exudates, usually of considerable extent and of a seropurulent or purulent character. As in the first-day cases, the appendices in this group, which were studied histologically, presented no uniformity as to gross appearances. Some of them are described as "gangrenous," others as "catarrhal" and "ulcerative" or "slight periappendicitis."

Microscopically, all the appendices show an intense leucocytic infiltration involving all coats, together with a more or less extensive ulceration of the mucosa, while 70 per cent. show a well-marked fibrinous or fibrinopurulent exudate on the peritoneal surface. In those cases which presented macroscopic evidence of gangrene the areas of necrosis as seen microscopically are decidedly more extensive than in the similar cases of the first-day group, while in those cases which did not present macroscopic evidences of gangrene the focal areas of necrosis so prominent in the first-day cases are still evident in the majority of sections, but are often obscured by the leucocytic infiltration.

Third Day Group.—This was made up of fifty-three patients operated on during the third day following the onset of symptoms. Twenty-nine (53.7 per cent.) of the cases in this group were accompanied by intraperitoneal fluid exudates which were of a distinctly purulent character and usually described as periappendiceal abscesses. The macroscopic evidences of disease were distinctly more prominent than in the earlier cases. Forty per cent. of the appendices studied histologically were described as "gangrenous" and all but three of the others as "acute" or "acute ulcerative."

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[1] The data referring to the condition of the peritoneum is taken from the notes made at the time of operation: all else is based on the descriptions and sections on file in the Bender Laboratory. The histologic observations have necessarily been confined to those cases, the sections of which have been preserved and are available for present study. While the anatomic variations, especially as regards the condition of the peritoneum, are so variable as to require a large series of cases on which to base satisfactory observations, this is not the case with the histologic changes which are so uniform that it is not deemed necessary to include a larger series of cases.

[2] The accompanying charts show graphically the relative frequency of the various types of lesions grouped according to the different periods as enumerated above and also serve to give an idea of the relationships existing between the character of the pathologic lesions and the duration of the disease. The absence of irregular fluctuations in the platted curves is evidence that the series of cases here studied has been sufficiently large for the purposes of this investigation, although the relative heights of the different curves must vary somewhat in different series of cases.

Microscopically, two recurrent cases show decided chronic changes, but no evidence of an acute process. The remaining cases all show a diffuse inflammation like that seen in the earlier groups. In the macroscopically gangrenous cases the necrosis is prominent, while in the non-gangrenous cases focal areas of necrosis are seen only in the mucosa. The most striking histologic feature which distinguishes this group from the earlier groups is the evidence of beginning repair as seen by the presence of fibroblasts in all sections. These new-formed connective tissue cells are especially numerous in the region of the peritoneum, although present in other areas, particularly in those cases showing the least marked leucocytic infiltration.

Fourth Day Group.—This was made up of thirty-one patients operated on during the fourth day following the onset of symptoms. Seventeen (54.5 per cent.) of the cases in this group were accompanied by purulent periappendiceal exudates usually described as abscesses. With the exception of one normal and one chronic atrophic appendix (microscopic diagnosis), all of the appendices in this group presented well-marked anatomic changes in general similar to those seen in the third-day cases.

Microscopically, the gangrenous cases show large areas of complete necrosis, the histologic picture differing but little from that seen in the gangrenous cases of the third-day group. In sections of the non-gangrenous cases, and in sections taken at some distance from the necrotic areas in the gangrenous appendices, the most noticeable histologic feature which distinguishes this group from the preceding one is a decided increase in the relative number of fibroblasts and the presence of numerous lymphocytes and; in several cases, plasma cells. In those cases accompanied by a periappendiceal exudate a few fibroblasts and many new-formed blood vessels can be seen extending into the exudate from the peritoneal surface. Focal areas of hemorrhage into the exudate occurring from these new-formed blood vessels are seen in many of the sections.

Fifth Day Group.—This was made up of twenty-seven patients operated on during the fifth day following the onset of symptoms. Fifteen (55.5 per cent.) of the cases in this group were accompanied by periappendiceal pus. With the exception of one recurrent case, all of the appendices presented easily recognizable anatomic changes most evident in the mucosa or on the peritoneal surface.

Microscopically, the lesions may be classified into two rather sharply defined groups. In the cases presenting macroscopic evidences of gangrene, the necrosis and polynuclear leucocytic infiltration is the predominating characteristic, although the repair process is well advanced in several instances. In the non-gangrenous cases the polynuclear leucocytes have practically disappeared except at the surfaces of the ulcerations in the mucosa and of the periappendiceal exudates. Throughout the coats of the appendix there is a marked increase in the number of fibroblasts and often an intense lymphocytic infiltration. In the periappendiceal exudates the new-formed blood vessels penetrate to a greater distance than in the fourth-day group and this granulation tissue is decidedly richer in fibroblasts.

Sixth Day Group.—This was made up of twenty-four patients operated on during the sixth day following the onset of symptoms. Twelve (50 per cent.) of the cases in this group were accompanied by periappendiceal pus and all the appendices showed well-marked anatomic changes. The partially organized periappendiceal exudates were very noticeable in those cases accompanied by abscess formation.

Histologically, the repair processes are decidedly more advanced than in the fifth-day group. The gangrenous cases show well-marked evidences of repair, the histologic picture of which is similar to that seen in the non-gangrenous cases of the preceding group. A number of these cases, however, present the picture of a fresh acute process engrafted on the subacute process, there being a diffuse leucocytic infiltration with areas of hemorrhage and necrosis, the latter often involving areas rich in fibroblasts. The non-gangrenous cases now show areas in which the fibroblasts are massed together and elongated so as to resemble young connective tissue cells. Small ulcers in the mucosa have apparently been largely repaired.

Seventh to Tenth Day Group.—This was made up of one hundred and six patients operated on from the seventh to the tenth day of the attack. Fifty (47.1 per cent.) of the patients operated on during this period were accompanied by periappendiceal pus, which in all but six cases was more or less localized and usually accompanied by marked evidences of organization. Anatomic changes, for the most part, were well marked, particularly so in those cases accompanied by partially organized periappendiceal exudates. In the cases unaccompanied by periappendiceal exudates the anatomic lesions were decidedly less prominent than in the earlier groups, and four of the appendices studied histologically were described anatomically as cases of catarrhal appendicitis.

Histologically, the repair process has become still more advanced, so that in 18 per cent. of the appendices in this group the organization is so far advanced as to present the picture of a distinctly chronic process, the evidence of a previous active inflammation being shown by the presence of new-formed fibrous tissue which is rich in connective tissue cells. In addition to the new-formed connective tissue in these cases, numerous focal collections of lymphocytes are seen, which are most noticeable in the subperitoneal tissues and muscular coats. In 64 per cent. of the appendices in this group the presence of the fibroblasts and other evidences of active repair is noticeabe, being most marked in those cases showing partially organized periappendiceal abscesses. Eighteen per cent. of the cases show evidences of an acute process, which is seen as a diffuse polynuclear leucocytic infiltration, often accompanied by hemorrhage and necrosis. In all but one of these acute cases, however, there are also evidences of an older subacute process.

Eleventh to Fifteenth Day Group.—This was made up of forty-eight patients operated on from the eleventh to the fifteenth day following the onset of symptoms. In this group but sixteen cases (33.3 per cent.) were accompanied by periappendiceal abscesses, and when present the pus was usually found in small collections surrounded by thick masses of new-formed connective tissue. The macroscopic appearances of the appendices in this group varied greatly: Two were described as "gangrenous," two as "acute," three as "normal," and the rest as "subacute," "chronic," "chronic obliterative," "chronic periappendicitis" and "catarrhal." Except in those cases showing an acute process and in those accompanied by evidences of periappendiceal or-the fixators readily abandon the leucocytes which produced them and become a constituent of the plasma.

Natural Antitoxic Immunity.

The leucocytes have also been brought in relationship to antitoxic immunity and the formation of antitoxins. In experimental tetanus exudates which are rich in leucocytes contain more toxin than does a similar quantity of blood. That is to say, the leucocytes have the power of absorbing toxins, and the natural immunity of the animal depends on the degree to which this power is present. The immunity of the chicken to tetanus depends not on non-susceptible nerve cells nor on the presence of natural antitoxin, but on the absorbing power of the leucocytes for the toxin. Not only do leucocytes absorb toxins, but it is held that they also are the producers of antitoxins. As compared with the side-chain theory it is a peculiarity of the view of Metchnikoff that antitoxin does not represent a constituent of the tissue cells, but rather the toxin itself, which has been altered by leucocytic activity in a manner as yet obscure.

Passive Antitoxic Immunity.

In passive antitoxic immunity the idea of a chemical union between toxin and antitoxin does not meet with general acceptance among the upholders of the phagocytic theory. It is sometimes said that antitoxins are efficacious from the fact that they stimulate phagocytosis (absorption) of the toxin,' the latter then suffering disintegration in the leucocytes.

Summary.

The following statements summarize the phagocytic theory of immunity as conceived by Metchnikoff:

1. Natural antibacterial immunity depends on and is coextensive with phagocytosis and subsequent digestion of the microbes. The intraleucocytic destruction of the micro-organisms is accomplished by the cytase, possibly aided by intraleucocytic fixators. Normal serum is devoid of both fixators and cytase.

2. Acquired antibacterial immunity depends on the establishment of a heightened phagocytic power as the result of immunization or infection. In diseases like anthrax, in which fixators are not increased, this new power is an acquired property of the leucocytes and is independent of any influence on the part of the serum. In diseases like cholera, the new fixators which are formed may render the micro-organisms more susceptible to phagocytosis, but this is probably secondary to increased function on the part of the phagocytes. Both cytase and fixator are produced by the phagocytic cells. In acquired active immunity to bacteria the fixators may be free in the serum plasma, but the cytase is intracellular. In all cases cytase becomes extracellular only as the result of phagolysis.

3. In passive antibacterial immunity, as when an antibacterial serum is injected for the sake of prophylaxis or cure, the serum is efficacious chiefly because it stimulates the leucocytes to increased phagocytosis.

4. Natural antitoxic immunity depends on the power of the leucocytes, and perhaps the generative organs, to absorb the toxin.

5. Active antitoxin immunity is established through the activity of the leucocytes, by which the toxin is probably so changed as to constitute antitoxin.

6. In passive antitoxic immunity the antitoxin presumably acts by stimulating the phagocytes to an increased absorption of the toxin.

Opsonins.

Many investigators are carrying on work in regard to phagocytosis and the properties of serums from a point of view which is entirely unbiased. From sources of this nature discoveries of recent date indicate that phagocytosis of micro-organisms by the leucocytes is impossible without the aid of some property in the serum. It seems that these substances, which the discoverers, Wright and Douglas, call opsonins, act directly on the bacteria, and that there is no reason to suppose that their virtue lies in a stimulation of the phagocytes themselves. The facts which permit of this deduction are the following: 1. When the fresh defibrinated blood of some animal is mixed with the culture of a suitable micro-organism (staphylococcus, streptococcus, anthrax bacillus, etc.) and placed in the thermostat for 20 to 30 minutes, stained preparations of the mixture show that the polymorphonuclear leucocytes contain a large number of the microbes. 2. If, however, all the serum is washed from the blood before adding the micro-organisms practically no bacteria are ingested. This shows the importance of the serum, but does not differentiate between some effect on the leucocytes on the one hand or the bacteria on the other. 3. In order to decide this point one may subject the suspension of bacteria to the action of fresh cell-free serum, and after a contact of about 30 minutes remove all the serum by centrifugation, and mix the "sensitized" culture with serum-free blood; phagocytosis occurs almost to the same degree as when the fresh defibrinated blood containing serum is used. These results seem to show definitely that phagocytosis depends on the power of the opsonins to affect the bacteria in some peculiar manner. Opsonins are very susceptible to heat, and, like complement, disappear spontaneously from the serum in a short time. Hektoen and Ruediger, and Bulloch and Atkin have confirmed the observations of Wright and Douglas and the former have added facts of importance. It seems that opsonin has a structure like that of toxin, i. e., a haptophorous and an opsoniferous group; "by heating sensitized bacteria the opsoniferous group appears to be destroyed, but the inactive opsonin (opsonoid) by saturating the receptors of the bacteria prevents further sensitization by fresh serum" (Hektoen and Ruediger). Various salt solutions neutralize the opsonins. Opsonins will be brought in still more important relationship to phagocytosis if it can be shown definitely that they are increased as the result of immunization or infection.

(To be continued.)

Clinical Reports

RENAL CALCULUS.

UNUSUAL SIZE, VOLUNTARILY EXPELLED.

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Patient.—Mrs. A., aged 22, married, with one child 14 months old, is anemic, has had no illness since childhood, but suffers from dysmenorrhea, which she has had since the beginning of menstruation.

History of Illness.—The latter part of November, 1904, she had a severe attack of cramps, which lasted three or four days, the exact cause or nature of which was not determined. Two weeks previous to the present attack she had a similar attack, severe in character.

The present illness began suddenly Jan. 7, 1905, with a sharp, spasmodic, colicky pain in the right side, with nausea and vomiting. January 8, the pain became so excruciating that she fell in collapse. I found her in a condition of profound shock. She was pulseless at the wrist and the heart sounds were very indistinct; temperature, 95.8, skin moist with cold, clammy perspiration; semi-delirious. Three-quarters of a grain of morphin given hypodermically gave very little relief. She was removed to the hospital.

Examination.—January 9, examination revealed pronounced tympanitis, with tenderness on pressure on right side, extending from the margin of the rib to the right groin; the pain radiated from a point over the right kidney toward the bladder. The point of greatest tenderness and distension was in the region of the right kidney and of the gall bladder. The great distension of the abdomen and the severe pain made a thorough examination impossible. Pulse and temperature varied, with the movement of the stone and the severity of the pain.

Diagnosis.—Renal colic.

Course of the Disease.—The amount of urine passed was scant and concentrated. Examination, microscopically, showed no pus or blood but a great abundance of uric acid crystals. There was no albumin, but the urine solidified on making the nitric acid test. Nitrate of urea crystallized immediately on coming in contact with nitric acid. Heat did not alter the urine.

On the third day, and on the days following, the bowels were abundantly moved; the pain became less excruciating and the tympanitis subsided entirely. Examination on the fifth day revealed a distended right kidney and ureter. The ureter was tender and distended from the kidney to a point on a direct line with the umbilicus; this condition was more marked on the sixth day. The distension of the ureter was above the calculus.

Up to the seventh day, the day of the passage of the stone, the amount of the twenty-four hours' urine was only from twenty-five to thirty-six ounces. Preliminary to operation on the afternoon of the seventh day, the bladder was thoroughly irrigated, and, a short time afterward, in passing the warm irrigation water, the calculus was voided in the vessel. The relaxing effect of the warm water no doubt released the stone from the ureter. The dimensions of the stone are: long circumference, ⅞ inch; short, ¾ inch; weight, 8 grains. With the passing of the calculus, the high temperature, severe pain and high pulse dropped below normal before morning.

The woman was discharged from the hospital three days after the expulsion of the stone.

Remarks.—The particular points of interest in this case are: 1. The low temperature and extreme shock. 2. The unusual size of the calculus to be voided voluntarily. 3. The stone after leaving the pelvis of the kidney completely obstructed the ureter; the accumulation of the urine above it gave a definite outline of the ureter and showed the approximate location of the stone. 4. The roughness of the stone and its large size did not produce hematuria. 5. Entire absence of pus. 6. The unusual feature of the almost complete crystallization of the urine in testing it with nitric acid.

I am indebted to Miss Ella Wilkinson, head nurse of St. Luke's Hospital, for reviewing this report.

EPILEPSY OF SYPHILITIC ORIGIN.*

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This patient was admitted to the nervous service of the John Sealy Hospital Dec. 28, 1904. The case presented a number of interesting features.

Patient.—J. S., male, white, widower, aged 35; is a dairyman and general laborer. He uses alcohol moderately, has no drug habits, but chews and smokes tobacco; his sanitary surroundings are fair; he takes plenty of time in eating and has a good appetie.

History.—His father and mother are living and in good health: one brother was poisoned, other brother and a sister are in good health, except that one of them has "liver trouble" of some kind. The patient has had measles and pneumonia. He says he received an injury over the right eye about five and a half years ago which "mashed in" the skull slightly. His physician called it a fracture of the skull. He had an attack of a similar nature to this one about three years ago, a second one a month later, and then a third attack about one year after the first. He has been well otherwise, and denies syphilis.

Present Disease.—The patient says that he was taken sick by suddenly fainting or losing consciousness, during which attacks he bit his tongue. He says that he regained consciousness in about two hours after each attack begun.

Examination.—He is a large, muscular man, with fair complexion, red hair and scanty beard, slightly pale, but very well nourished. His expression is dull and listless, and he sits for a long time without saying a word. There is a linear scar over the right eye, about 4 or 5 cm. long, running into the eyebrow, and said to have been received from a blow on the head. Arteries are sclerosed, heart, lungs and abdominal organs are apparently normal; tibia is slightly roughened, and the supratrochlear, cervical and inguinal glands are easily felt. Pricking with a pin showed blunted sensation, but no areas of anesthesia. Patellar reflexes were diminished. Pupils reacted to light and distance. Gait is normal. Grip in both hands is weak.

Treatment.—A diagnosis of epilepsy of a grand mal type was made, and, owing to the slight roughening of tibia, he was put on saturated solution of potassium iodid, m. xv, three times a day, the dose to be increased 1 minim daily.

Course of the Disease.—January 5 he had an attack, but no note of its character was made.

January 6: The following note was made: Patient complains of great headache and sleeplessness; convulsions come on at irregular intervals. He says that he begins to feel dull about the head a short time before convulsion. He is very dull, taking but little interest in what is going on in the ward. Patellar reflexes are increased. Pupils react to light and distance. He stands poorly, and the grip in both hands is weak; his intelligence is poor, and he answers slowly. He recognizes position of limbs and body in space, but is slow to feel pricks of pins. There are no areas of anesthesia or of hyperesthesia. There is no paralysis.

January 9: The patient had seven severe attacks that were recorded. These continued during January 10, being partly controlled by chloroform and amyl nitrite.

January 11: The nurse recorded fifteen attacks from 4 a. m. to 7 a. m., and the following note was made: Patient is having very hard convulsions, somewhat Jacksonian in type, though there is no constancy of onset. Convulsions come on in right side of face and pass to right arm, left arm, whole face and lower jaw and then to legs and entire body. Eyes are directed to the right, axis parallel. Spasms are both clonic and tonic in character; they begin as tonic spasms as a rule.

The convulsions continued to grow more frequent and severe notwithstanding administration of the bromids and chloral and occasionally morphia and antipyrin. Chloroform was used to modify the convulsions. Owing to the comatose condition of the patient it became necessary to feed him through the nostril by tube.

Drs. Thompson and Dudgeon were consulted with reference to operative interference, but it was decided that the symptoms were too indefinite, though there was a history of an injury.

January 12: The patient had a severe convulsion at 2 p. m. He recovered consciousness about 4 p. m. and has not had a convulsion since. On this day, he was put on 1/10 grain doses of bichlorid of mercury by hypodermic injection, and his improvement continued very rapidly to complete recovery.

Remarks.—Syphilitic epilepsy was suspected on account of the age of onset. Practically all authorities agree that epilepsy coming on during adult life, unless directly traceable to injury, should be regarded as syphilitic in character.

There is nothing distinctive about this form of epilepsy though Charcot claims that the jactitations of syphilitic epilepsy are of a peculiar character, viz., if the convulsions begin in the upper extremity, the lower is attacked only after the face. If the face is attacked, the convulsions spread to the upper and then to the lower extremity, and if they begin in the lower, they attack the upper extremity and then the face. The convulsions never occur in the order of leg, face and arm, or arm, leg and face.

It was observed in this case that the movements began in the face, next involving the upper extremities, and then the legs, finally taking the whole body. The injury received was over the right eye, while the apparent focus was on the left side. A lack of regularity in the mode of onset also led us to suspect syphilis as the cause.

The improvement on anti-syphilitic remedies fully justified the diagnosis of syphilis as the cause of the epileptic attacks.

Black Urine.—The *Medical Council* states that melanuria often occurs after eating damson plums. When the patient is taking ferric chlorid or nitric acid, the urine may turn black after it cools.

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*Reported to the University of Texas Medical Club, 1905.

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THE CHRONIC FORMS OF PURPURA HEMORRHAGICA.

Purpura hemorrhagica appears so generally as an acute affection, and the chronic forms are so seldom mentioned in medical literature, that we are apt to regard them as being exceedingly rare. In the most recent text-books even, the chronic forms are barely mentioned, and for extended descriptions it is necessary to consult articles in medical journals. The recent work of the French school, if we are to judge from the article of Bensaude and Rivet,[1] tends to show that the affection is far from being a complete rarity, but has been overlooked or confounded with hemophilia.

The condition is found clinically under two forms, a continuous and an intermittent. The continuous form is the rarer of the two. The subjects of this variety generally consult the physician for general weakness with gastric and intestinal disorders, and the skin lesions are often considered of minor importance, and are discovered as the result of routine examination. The patients usually give a history of having been subject for years to attacks of nosebleed or hemorrhage from the gums. Continuous observation of the patients shows that for months or years they present petechial eruptions appearing in crops and disappearing spontaneously. The severe hemorrhagic crises of acute purpura hemorrhagica are entirely lacking. The intermittent form is more common. In these cases, there is a history of crops of purpura recurring at intervals of months or even years. These attacks are quite severe and resemble closely the ordinary picture of Werlhof's disease. Between the attacks of skin eruption it is not uncommon for the patient to suffer from nosebleed or gingival hemorrhages. There is often a history of perfect health between the purpuric attacks, and it is only by questioning that one finds that nosebleed, menorrhagia, or bruising from insignificant traumata have occurred in the seemingly normal intervals. In other cases, the general health between the attacks is more or less disturbed; the patient feels weak, there is a certain degree of anemia, or the digestion is feeble and accompanied by more or less pain. In some cases, there seems to be an alternation between visceral and skin hemorrhages, the latter disappearing on the advent of visceral bleeding. The free intervals vary greatly in different cases, and a period as long as seventeen years may elapse between two purpuric attacks. It is difficult on account of the long remissions to state absolutely whether a given patient is well or not, and it is known that in some instances the disease has resulted fatally.

The diagnosis of these cases is often far from easy, especially when they are observed for short periods only. During the intervals, when local hemorrhages, as nosebleed or menorrhagia, are present it is natural to conclude that the hemorrhage is due to some local condition, and during the purpuric attack the case is apt to be regarded as one of the ordinary type of Werlhof's disease. When profuse hemorrhages occur, a diagnosis of hemophilia is often made. Chronic purpura hemorrhagica differs from this latter condition in the fact that it is not hereditary, and also in the fact that the blood coagulates more rapidly than normally under the influence of heat, and once coagulated, the normal retraction of the clot occurs.

It is difficult to explain this peculiar intermittency in the hemorrhagic tendency. The knowledge that hemorrhages accompany some disturbance in hepatic function has led to the examination of the liver in these cases for signs of hepatic insufficiency. Examination of a number of these cases for such signs, however, has been without result. The resemblance to hemorrhagic sepsis has led to bacteriologic researches, but, so far, these also have been fruitless. One form of infection has been associated with these cases not infrequently, and that is tuberculosis. It has been suggested that possibly the recurrent attacks of purpura may be associated with recurrent invasions of the body by tubercle bacilli from some usually latent hidden focus of the disease. While this may be true in some instances, and the coincidence seems worthy of attention, it seems more likely that we are dealing with an intermittent intestinal toxemia. The resemblance of this disease to scurvy, and the more marked resemblance to Henoch's purpura, and to the group of cases classed by Osler under the erythema exudativum type, together with the almost constant presence of gastrointestinal disturbances, make this seem likely. The condition is one which has so far remained unnoted in this country; it seems likely that it occurs here, and a further investigation of these interesting cases would be desirable.

HISTORY OF THE MEDICAL DEPARTMENT OF TRANSYLVANIA UNIVERSITY.

It is of interest and of profit, in these rushing times, occasionally to pause for a survey of past events and to note how institutions and men, once prominent, fade into the indistinct and well-nigh forgotten past. The "History of the Medical Department of Transylvania University,"[1] just published, gives, for the first time, a complete sketch of one of the most interesting medical institutions in America, of which now not even the name remains. Born of the growing demand for learning in the Trans-Allegheny region and fostered by the difficulties of travel across the mountains, the little school at Lexington grew with phenomenal rapidity to a position second to none in the United States. In the thirty-nine years of its active life (1817-1857) there were 6,456 students enrolled and not less than 1,881 graduated from this, the first medical school founded in the West. The author, Dr. Peter, was for many years a member of the faculty of this remarkable institution and long survived its dissolution. In the biographical studies of his colleagues he gives an account of the rise, phenomenal growth, decline and final disruption of an institution which exercised a powerful, though transient, influence in the middle period of the Nineteenth Century.

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[1] Arch. Gén. de Méd., 1905, No. 4.

[1] The History of the Medical Department of Transylvania University. By. Dr. R. Peter. Prepared for publication by his daughter, Miss Johanna Peter, member of the Filson Club. Illustrated. Filson Club Publications No. 20. Paper. Pp 193. Louisville, Ky.; John P. Morton & Co. 1905.

From the long list of names we can pick out several of the ablest writers and teachers our country has produced. Samuel Brown, Edinburgh graduate and first professor of medicine, introduced vaccination into the West, and as early as 1802, when the eastern men were beginning their first experiments, had vaccinated over 500 persons with the bovine virus. Benjamin Dudley, thoroughly trained in France and England, was in the chair of surgery from the opening until 1850, when he retired full of honors to live for twenty years in peace and comfort on his beautiful estate. Dudley, while erratic in some particulars, was one of the famous surgeons of his day. Careful, conservative and eminently successful, he drew patients and students from the whole Mississippi Valley.

The bright. particular stars of this galaxy, however, were Daniel Drake and Elisha Bartlett, who held the chair of medicine in turn, though separated by a period of years in their incumbency. Drake was an enthusiastic investigator and the most popular teacher of his time; a restless spirit, he wandered all over the country, having held professorships in eleven different schools. The journals of the period are filled with his writings, and he has left as his monument one of the most important contributions ever made by an American to medicine, namely, his "Treatise on the Principal Diseases of the Interior Valley of America." Elisha Bartlett, scholar. poet, philosopher, as well as student and teacher of medicine. was connected with Transylvania during some of his best and most productive years. It was while in Lexington that he produced the work on which his fame as a medical writer principally rests. His "Fevers," published in 1842. contains a description of typhoid which is classic. With his lovable nature and his literary productions, the tributes of Holmes, Gross and Osler have made us familiar. Among others less eminent Charles Caldwell is the most striking figure. Intensely fond of polemics, his caustic tongue made him many enemies. and his "Autobiography," published after his death. is one of the most vitriolic works of the kind ever written. It is said of this book that "he used no ink. but dipped his pen alternately in wormwood and in gall."

A reversal of the economic conditions which had contributed to the founding and growth of Transylvania brought about its decline. With the development of steam navigation on the rivers, the population drifted rapidly from the interior towns to St. Louis, Cincinnati and other cities, so that in 1856 the last course of lectures was given and the famous and influential school at Lexington was closed never to be reopened.

The profession at large is indebted to the memory of Dr. Peter for the preservation of this very interesting chapter in the history of American medicine and to the Filson Club for making it available to the general reader.

EARLY DIAGNOSIS OF TUBERCULOSIS.

The one persistent note in the important addresses at the recent meeting[1] of the National Association for the Study and Prevention of Tuberculosis, in Washington, was the necessity, in the crusade against tuberculosis, for education—education not only for the public, but also for the medical profession. It was with regard to the early diagnosis of tuberculosis particularly that such authorities as Trudeau and Osler emphasized the necessity for progress among medical practitioners. The points in early diagnosis that were deemed of special importance can not but be of interest to all who recognize the value of the present movement for the eradication of the great white plague of the North. There is no one pathognomonic sign of incipient tuberculosis and no constant set of symptoms that can be depended on absolutely as indicating the presence of the disease in an early stage. The one thing necessary is for the careful practitioner to consider a number of symptoms and to recognize that the presence of even a few of them in the same individual must be considered as evidence of the existence of tuberculosis. Many of these early symptoms are, in themselves, of such slight significance that only careful attention will lead to their recognition and to the realization of their possible importance.

As pointed out in the report[2] of the committee on early diagnosis of tuberculosis, and in the discussion which followed the presentation of this report, it is in individuals of special physical constitution that tuberculosis is most likely to occur. In those who are under weight and who are lacking in normal thoracic development and in respiratory power, the presence of any suspicious symptom must be considered of significance. If such individuals have been exposed to possible contagion from tuberculosis and if they exhibit even such slight signs as beginning loss of weight with persistent dry cough, even without the presence of tubercle bacilli in the sputum, it is extremely rash to make a negative diagnosis as to tuberculosis. Patients of this kind must be kept under observation until they have regained their normal weight and have lost their cough before their cases can be considered to be above suspicion. It is much better for them to have been treated, perhaps needlessly, for tuberculosis than to have been told that they were not suffering from the disease because there were no absolute pathognomonic signs, and so, perhaps, lose precious time just when it is most valuable.

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[1] THE JOURNAL, May 27, p. 1706; June 3, p. 1804, and June 10, p. 1874.

[2] THE JOURNAL, June, 10, p. 1874.

It is sometimes said that disturbance of pulse and temperature must be considered as necessary for the diagnosis of an active tuberculous process. In many patients, however, it will be found that the pulse shows this disturbance only after exercise and that the temperature is elevated only at times when the patient is tired or at such periods of physical stress as during menstruation. It is considered important that advantage should be taken of times like these in order to determine how susceptible to changes of pulse and temperature the patient may be, and thus deduce the presence of some infectious element causing an instability of these usually well-balanced functions.

With regard to physical signs in the lungs, the report of the committee emphasized particularly the fact that râles may be heard with much more certainty at certain times than at others. In the early morning, râles are much more likely to be present than in the afternoon. They may be heard quite easily on damp days and yet looked for in vain on dry days. They may be heard when the patient is tired, much better, as a rule, than when he feels well. In the case of women, râles are much more likely to be present and audible during the menstrual period than at any other time. It is the knowledge of such aids to diagnosis that enables the expert to recognize the disease at a much earlier period than is possible for those who consider that a single hurried examination enables them to tell something definite with regard to the existence of incipient tuberculosis.

All the experts are agreed on the danger that inevitably follows from negative diagnoses of tuberculosis made after insufficient examination. Patients are encouraged to continue their usual mode of life when they should be taking the outdoor air and diet treatment as conscientiously as possible. More than one experienced diagnostician insisted that a single examination of the lungs in a suspicious case is never sufficient ground for a negative diagnosis and that the making of it under such circumstances invites error. Indeed, so difficult to those with most experience is the diagnosis of incipient tuberculosis in very early cases that practically all those who see many tuberculous patients at sanitariums are agreed that tuberculin constitutes a very valuable agent in making a sufficiently early diagnosis, and that in some cases a positive diagnosis can only be reached by this means. In a word, the more knowledge of the disease there is the less the assurance in reaching conclusions in early cases. While unfortunately the reassurance of the patient by a negative diagnosis seems to the [illegible] immediate decision, the inexpert almost t serious consequences of error must emphasize the necessity for the most careful investigation of each individual case.

THE TREATMENT OF TETANUS.

So far as can be learned from the incomplete statistics available, tetanus following Fourth of July injuries is particularly virulent. The period of incubation is usually short, the attack violent, and the rate of mortality seems to be not far from 95 per cent., while the usual rate for traumatic tetanus is probably about 80 per cent. This great virulence is due apparently to the unusually favorable conditions furnished in the lacerated, necrotic, air-tight wound produced by blank cartridges, which give the bacilli the best possible opportunity for rapid and unrestricted growth, with the production of corresponding amounts of toxin. In each of the last two epidemics, the percentage of mortality has been about the same and far too high to indicate any substantial results from the treatment used. Unfortunately the more modern methods of treatment seem to have been seldom tried, the usual routine of sedatives and the subcutaneous injection of antitoxin having been generally followed. The sad inefficiency of antitoxin when so used has led to many researches, both experimental and clinical, to secure some better method of administering it, for there is no doubt that tetanus antitoxin will neutralize tetanus toxin with which it comes in contact; therefore, the problem is to bring about this *contact rapidly* and abundantly, and particularly where it is most needed; that is, within the motor nerve cells of the spinal cord. As an outcome of this work certain results have been obtained that have led to a method of administration of tetanus antitoxin which seems, so far, to have had a better success than any other yet used. This may be called the combined intraneural and intraspinal antitoxic treatment. A year ago, in a special article,[1] we discussed the physiologic considerations on which it is based, and the encouraging results obtained up to that time. Since then a number of new cases have been reported with very favorable results, which indicate that through this method we can hope for, at least, some lowering of the mortality figures below the almost hope-destroying point at which they now stand.

In practice the method is as follows: The patient is anesthetized, preferably with chloroform, and an incision is made over the site of the large nerve trunks leading to the injured part, if the wound is in an extremity, as is nearly always the case. The nerves being isolated and exposed for a distance of from one to two inches, as much tetanus antitoxin as possible is injected into the substance of the nerve trunk through a fine hypodermic needle—generally from 2 to 4 c.c., in the case of a large trunk; a slight injury of the nerve fibers is rather to be desired than otherwise, as the object of the procedure is to get the antitoxin into the motor nerve fibers, along which it seems to be transported into the cord. A lumbar puncture should then be made, and, after withdrawal of as much cerebrospinal fluid as is safe, generally as much as will readily flow out of the needle, for it seems to contain much toxin, from 3 to 10 c.c. of antitoxin is injected into the spinal canal, depending on the age of the patient. In addition to this, it is well to inject an additional 10 to 20 c.c. of antitoxin subcutaneously, preferably near the wound or in territory supplied by nerves from the same section of the cord as the injured part. There need be no fear of giving too much antitoxin—patients have received hundreds of cubic centimeters without showing untoward effects beyond an occasional dermatitis. Schley[2] has suggested that to facilitate reinjection the wounds made in isolating the nerves be left packed lightly with gauze strips saturated with antitoxin, which is kept from escaping into the dressing by means of rubber protective. While the patient is still under the anesthetic the wound is, of course, to be thoroughly and vigorously cleaned. Tetanus-infected wounds are to be kept open to heal from the bottom, and so dressed that air may reach them after diffusing through the dressings. The injection of serum into the spinal canal, which should always be preceded by withdrawal of a few cubic centimeters of fluid, may be repeated as often as every six to twelve hours during the first forty-eight hours, and the intraneural injections should be repeated at least once again after twelve or more hours, as also should the subcutaneous injections. Administration of chloroform for the purpose of making these frequent injections has a decidedly beneficial effect, not only affording the patient a rest from the spasms, but also lessening their violence and frequency for some time afterward.

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[1] The Journal, June 18, 1904, p. 1621.

Tetanus antitoxin, at the best, does not produce effects rapidly, and the symptomatic treatment of each case is not altered in the least by its use. The spasms must be kept down, if possible, to prevent death from exhaustion or asphyxia. In addition to the usual use of chloral and morphin as sedatives, more vigorous measures may well be taken. When the violence of the spasms threatens asphyxia, chloroform is always indicated. Intraspinal injection of eucain and morphin, as advocated by Murphy,[3] is a highly rational procedure and may be performed at the same time as the antitoxin injection without complicating the treatment. Curare, first suggested by Claude Bernard, has been used successfully both experimentally and practically in von Leyden's clinic[4] and is the most powerful of all agents in controlling the spasms, although without influence on the course of the disease. S. A. Mathews has suggested the intravenous injection of a calcium containing salt solution, the formula of which has been published in The Journal,[5] which also has the effect of reducing the muscular spasm as well as improving elimination. This is especially to be urged as a method always available to practitioners who are so situated as to be unable to secure antitoxin promptly.

Tetanus is fortunately so uncommon a disease that no one person is able to acquire an extended experience with its course and treatment; hence, we must rely on what can be learned by compiling and studying the reports of as many isolated cases as possible. By this means has been reached the conclusion that the treatment of tetanus by subcutaneous injection of antitoxin adds a slight improvement to the usual sedative measures, but by no means enough to warrant us in resting content with its results.

Of the various other methods suggested, the combined intraneural and intraspinal injections have, so far, furnished the best results, and this method is based on the soundest experimental and clinical basis, for which reasons we have ventured to urge its application in all cases of tetanus. It is extremely important that case records of tetanus patients, whether recovering or not, be reported, in order to add to our scanty information on the subject, and especially so when a new method of treatment is tried. Only by collecting many such scattered reports can a basis for future improvement be obtained.

AMENORRHEA AND SYSTEMIC DISEASE.

It is usually considered that amenorrhea, especially if it asserts itself after menstruation has once been thoroughly established, is due to some affection of the genital tract. As a matter of fact, however, the cessation is more likely to be the consequence of some systemic disease. The cessation of the menses in young women may be the first signs of tuberculosis, when there is otherwise little general disturbance of the health. As a matter of fact, menstruation and the menstrual period in women present conditions, modifications of which in various ways point more often to an active tuberculous process in the system than almost any other set of symptoms. Recently it has been noted that chlorosis is reported much less frequently than used to be the case, and there would seem to be a lessening of the prevalence of this blood affection in America. It has been suggested, however, that the apparent diminution of chlorosis is really due to the earlier recognition of tuberculosis than formerly. The two affections present a similar blood picture at the beginning, and the treatment—fresh air and abundant diet, with care of the bowels—is the same for both. It is more favorable to find tuberculosis present than severe chlorosis, since genuine cases of chlorosis are likely to be associated with defects in the blood-making organs, or with abnormally small size of the heart and arteries, conditions which are hopeless of treatment.

Certain nutritional disturbances consequent on a marked change in the habits of life of the individual are often followed by a cessation of the menses. This is especially true when young women move from the country into the city, and as a consequence have much less outdoor air than before, and usually, also, much less nutritious food. Most immigrants present a period during the first year of their sojourn in America during which their menses are irregular, if not entirely absent. This, too, would seem to be a result of the disturbance of the blood-making function, consequent on a lessened amount of fresh air. Sir Andrew Clarke used to insist, however, that chlorotic conditions, associated with amenorrhea, are more often the result of chronic constipation or of insufficient evacuation of the bowels—two quite distinct conditions—than of any other single cause. Certain it is that most of the country girls who come to the city, as well as most of the foreigners who come to this country, are apt to suffer for a time from irregularity of the bowels, and treatment of this symptom does more to bring about a return to their normal condition than any more direct remedial measures that may be considered indicated for the menstrual disturbance.

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[2] Med. Rec., Oct. 15, 1904.
[3] The Journal, Aug. 13, 1904.
[4] Therapie der Gegenwart, vol. xlv, No. 9.
[5] The Journal, Aug. 29, 1903, p. 565.

In quite recent years it has come to be realized that many of the serious nervous affections have amenorrhea as one of their preliminary or very early symptoms. This is especially true of affections of the ductless glands. When there is lack of the thyroid substance in the system, as occurs during myxedema, amenorrhea is almost the rule. In a few cases of exophthalmic goiter associated with a distinct tendency to obesity during the years between fifteen and twenty, menstruation is often scanty or is absent entirely. As a rule, during exophthalmic goiter, however, there is an increase of the menstrual flow. It is said that the cases marked by amenorrhea are usually amenable to treatment by thyroid extract. The first symptom of Addison's disease in young women is likely to be a suppression of menstruation. The lowered blood pressure consequent on the absence of the internal secretion of the suprarenal bodies somehow affects the function of the uterine mucosa so as to prevent the usual hemorrhagic exudation.

The disturbance of the function of the pituitary body associated with the enlargement of the face and the extremities, that eventually gives the clinical picture of acromegaly, is likely to have as one of its first symptoms the absence of menstruation. This occurs at a time when there are but very few signs of the disease that is developing. A certain amount of coarsening of the features may have been noticed, but even friends are not likely to consider this as evidence of a pathologic condition. Sometimes the menses are absent for several months before any pathognomonic signs of the serious nervous disease that is at work can be recognized. Amenorrhea associated with very severe headaches for which treatment is of little avail, especially if there is also some disturbance of vision, or if there is vomiting, without cause, must be considered suspicious, and if the features of the patient are heavier than normal, then the development of a tumor of the hypophysis must be considered as one of the possibilities in the case.

INNOVATION IN MEDICAL SOCIETY WORK.

The American Gynecological Society, at its recent meeting, introduced an innovation which is worthy of adoption by other societies. Authors were allowed to read only full abstracts of their papers, limited to twelve to fifteen minutes, according to the nature of the subjects discussed, although the complete papers, which, in some instances, were twice as long as the abstracts, were handed to the secretary for publication in full in the annual volume of transactions. Such a reading inaugurated each discussion, and the member whose ideas were thus succinctly set before his associates took part in the discussion and closed it. By this method the ideas of the individual members were more intelligently presented than if they had read their complete papers. The time of the society is economized, full debate is encouraged, and at the same time the members have the advantage of publishing their contributions to the world in which their points are set forth to the fullest length and without time limitation. The discussions elicited by this method were not only pointed and spirited, but singularly interesting and instructive. With the inauguration of this plan, it was evident that the patience of the members was not taxed beyond the point of endurance, as is frequently the case, in listening to long, tedious introductories, statistical data, and exhaustive recitals of the work of others. On the contrary, the curtailed contributions were listened to with marked attention. The salient points in them were set forth clearly, and in no instance was clearness of expression sacrificed for the sake of brevity.

PURE VACCINE.

Dr. Anderson's article in this issue reports a very satisfactory state of affairs as regards the purity of vaccine material in this country. While the federal government can not constitutionally exercise any control over local municipal laboratories such as exist in some large cities, the benefits of its supervision in the management of the private firms engaged in the manufacture of vaccine and other organic therapeutic agents is very obvious. We would not wish to be understood as inferring that manufacturers would intentionally send out dangerous serums, etc., but the fact that one or two have been obliged to retire from business in this line shows what was needed in the way of government inspection. At present, it appears that the business is in good hands, yet the fact that with one exception there has been an improvement in the product since the inauguration of the government inspection is sufficiently significant. The public can rest easy in regard to the purity of its vaccine matter at the present time.

SANITATION AT THE ISTHMUS.

Colonel W. C. Gorgas, Chief Sanitary Officer, Isthmian Canal Zone, in *Harper's Weekly*, May 27, writes entertainingly of the sanitary work accomplished at the isthmus and of the plans for the future. The article is admirably adapted to its purpose of interesting the public in the methods of the modern educated sanitarian, but it contains many points of interest to physicians.

Colonel Gorgas compares the death rate and morbidity rate of the first year of American occupation with what is known regarding the first year of French work on the canal. He estimates (exact figures not yet being available) that the mortality during the last year has been 14.66 per 1000, while the French reported 67 per 1000 after excluding deaths occurring out of the hospitals. He describes the measures which have been adopted and which have resulted in the disappearance of yellow fever from the city of Panama; the paving and cleaning of the streets, the collection of garbage, the ditching and oiling of swampy ground in order to destroy mosquitoes, the covering of all fresh-water receptacles, and the fumigation of every house in the city to kill the infected mosquitoes. Similar work has been done along the line of the Panama Railroad. There is a quarantine system and an immigration bureau. In connection with the hospital work, there is a laboratory for the investigation of diseases, and, in all, the sanitary work furnishes employment for a thousand men. During the next year the city of Panama will receive good water and sewerage systems, and the city of Colon will be filled in with dredged material until it is raised from 12 to 15 feet above water level. In closing, Dr. Gorgas asserts that "it is not a very difficult thing to keep yellow fever out," and notes that Havana—treated in a similar way—has been free from yellow fever since 1901. He believes that we shall attain an equally good result on the isthmus. The whole article, while tentative, preliminary and popular, is hopeful and confident. The medical profession is given every reason to hope that in a short but sufficient period American medical science will achieve a similar triumph to that already won in Cuba. Until sanitary measures are perfected some ill conditions are to be anticipated, but we need not be influenced by the gloomy forebodings given to the newspapers by disappointed adventurers now returning from the isthmus.

THE UNTOWARD SYMPTOMS INCIDENT TO THE USE OF ANTITOXIN.

Nearly every one, at one time or another, has met with untoward symptoms following the use of antitoxin. As a rule, these symptoms appear in the form of more or less distressing urticarias, myalgias, arthralgias and erythemas, but occasionally there may be seen marked cyanosis, syncope and collapse. None of these cases seems to have had a fatal outcome, but the symptoms may be extremely alarming, and we may well ask what is their underlying cause. We know that the repeated injection of serum from one animal into an animal of a different species gives rise to the formation of precipitins in the serum of the injected animal. That is, if the clear serum of the injected animal is mixed with a small quantity of serum coming from an animal of the same species as that which furnished the serum for injection, the resultant mixture soon becomes turbid owing to the formation of a precipitate. It has been noticed that the untoward symptoms following the use of antitoxin frequently increase in severity with the increase in the number of injections. This fact gave rise to the suspicion that these symptoms may be dependent on the formation of precipitins in the serum of the patient. The supporters of this theory believe that the reaction between the horse serum and the patient's serum gives rise to the formation of emboli which occlude the finer capillaries and thus produce the accidents incident to the use of these sera. The researches of Hamburger and Moro, Arthus, Francioni, Rovere and others point toward the correctness of this theory. Hamburger and Moro were among the first who showed that a precipitate is formed, *in vitro,* when antitoxin is mixed with the serum furnished by a patient who has had urticaria or other symptoms due to the injection of antitoxin. In one case, for instance, they obtained no reaction with the serum taken on the third day after the injection of antitoxin. On the fourteenth day the patient developed a severe urticaria and for forty-eight hours after the appearance of this eruption the patient's serum gave a distinct precipitate with horse serum. Francioni found that the accidents following the use of antitoxin are always accompanied by the formation of precipitins in the patient's serum, but the latter may be present in small amount without producing symptoms. Arthus showed that although horse serum is not toxic for rabbits, repeated subcutaneous injections produce local disturbances of gradually increasing severity. After the first few injections, all further injections produced marked swelling and localized gangrene. Rovere[1] has recently taken up this problem and came to the same conclusions as the earlier investigators. He studied twenty cases and got a positive reaction in three. These three patients had developed an extensive urticaria and were the only ones in his series that had distressing symptoms. Three patients whose serum gave negative results had a very slight urticaria, and Rovere believes that here, too, the precipitins may have been present, but in too small amounts to be detected. In one of the patients who developed an extensive urticaria and in whose serum precipitins were demonstrated, a marked local reaction was noticed. Two subsequent injections into this patient gave rise to a more severe local reaction than the first. This would seem to corroborate Arthus' work on rabbits. It would seem from these experiments that the accidents following the use of antitoxin are in some way associated with the formation of precipitins in the serum of the patient. It must be mentioned, however, that this explanation makes it difficult to understand why these symptoms, if due to embolism, are of such an evanescent nature.

Medical News

ILLINOIS.

Trolley Day Successful.—Hospital trolley day at Galesburg, when the street car receipts were turned over to the hospital fund, netted nearly $1,200 to the institution.

To Save Babies.—The State Board of Health has issued a circular for the guidance of mothers, instructing them as to the best methods of feeding and caring for infants, and giving simple and explicit directions as to the methods to be adopted during the summer months which are so full of peril to infant life.

Nurses' Bill Vetoed.—Governor Deneen has vetoed the bill for an act to establish a state board of examiners of registered nurses. An analysis of the veto shows that the bill conferred special privileges on graduates of certain training schools, and that hardships were imposed on many well qualified and experienced nurses now in practice.

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[1] Arch. Gén. de Méd., Feb. 7, 1905.

Personal.—Dr. Frank H. Norbury, Jacksonville, has been elected professor of nervous and mental diseases in Keokuk Medical College.——Dr. H. H. Fletcher, North Henderson, who is now in London, will sail for home June 16.——Dr. Edwin M. Minnick, Bradford, returned from Vienna May 20.——Dr. John C. Corbas, Jr., has been appointed local surgeon at Mendota for the C., M. & St. P. Ry.——Dr. John A. Davis, Farmer City, tripped over a low wire fence June 1 and fell, breaking an arm and dislocating a wrist.

Chicago.

Personal.—Dr. Casey A. Wood sailed for Europe June 9 from Montreal on the *Victorian.*——Dr. Frank E. Pierce has been appointed surgeon of the Indiana Harbor Railroad Company.

Concerts for Charity.—On June 3 Creatore's band gave a concert in behalf of the new Columbus Hospital. The receipts exceeded $3,000.——An entertainment given May 28 for the benefit of St. Mary of Nazareth Hospital netted about $2,500 for the institution.

The Week's Deaths.—The total deaths from all causes for the week ended June 3 were 467, equivalent to an annual death rate of 12.22 per 1,000. Heart diseases led the chief death causes with 59, followed by pneumonia with 49, consumption with 47, and violence with 45.

Physicians' Club Annual.—At the annual meeting of the Physicians' Club of Chicago, May 23, it was announced that the membership list was full and that there were several on the waiting list. Dr. Charles Louis Mix was elected secretary, and Drs. Clarence A. Earle, Desplaines, and Henry F. Lewis and Arthur M. Corwin, were elected directors. It was decided to continue the policy of holding irregular meetings.

State University Commencement.—The twenty-third annual commencement exercises of the College of Physicians and Surgeons, the College of Medicine of the University of Illinois, were held June 6. A class of 213 was graduated, and 13 of the class were women. Four of these appear on the honor list. Rev. William A. Quayle delivered the doctorate address, and Prof. T. J. Burrill, vice-president of the University of Illinois, conferred the degrees.

May Mortality.—During May 2,180 deaths were reported, equivalent to annual death rate of 12.88 per 1,000. There were 105 fewer deaths than in May, 1904—representing a decrease of 5.2 per cent. in the annual death rate. Among the causes showing increase over May, 1904, are: Acute intestinal diseases, 7; bronchitis, 6; cancer, 4; convulsions, 8; heart disease, 50; measles, 32; nervous diseases, 29; smallpox, 6; suicide, 15; violence other than suicide, 23; whooping cough, 57. Among those showing decreases are: Apoplexy, 16; Bright's disease, 29; consumption, 19; diphtheria, 10; pneumonia, 146; scarlet fever, 8; typhoid fever, 8. Pneumonia, consumption, heart diseases and violence, in the order named, headed the list of death causes.

MARYLAND.

Baltimore.

Women Graduate.—The commencement exercises of the Woman's Medical College were held May 31. Two graduates received diplomas from Dr. J. H. Mason Knox, president of the faculty.

Personal.—Dr. S. M. Stratton, professor of experimental psychology at Johns Hopkins University, has gone to Connecticut for the summer.——Drs. Jacob H. Hartman and John N. Mackenzie are at Atlantic City.——Dr. Daniel Dunott will be resident physician at Deer Park, Md., this summer.——Dr. Melville T. Carter has returned from a health trip to Mexico.——Dr. H. Warren Buckler will spend the early summer at Cedarhurst, L. I., and will go later to White Sulphur Springs, Va.——Dr. John Turner has been elected a member of the National Geographic Society, Washington.

Report of Hospital for Crippled Children.—The biennial report of the Hospital for the Relief of Crippled and Deformed Children shows that 1,552 patients were treated, of whom 702 were cured, 683 improved, 59 unimproved, 81 lost sight of, and 27 died. There were 2,438 free cases treated in the dispensary. For 1904 the average daily number of children treated was 44. The present indebtedness is $5,000. The hospital accommodates 60 patients (six beds being for colored children). The state gives $5,000 and the city supports 23 beds at 50 cents a day each. Four beds are endowed in perpetuity and seven annually. The summer hospital in the Blue Ridge Mountains will open June 15.

MASSACHUSETTS.

State Board Election.—The Massachusetts State Board of Health has re-elected Dr. Henry P. Walcott, Boston, chairman, and Dr. Charles Harrington, Boston, secretary.

Diphtheria.—While Boston has been singularly free from diphtheria, two weeks having passed recently with no deaths reported from that disease, Barre and Quincy have each been obliged to close school buildings in an effort to check rising epidemics.

To Investigate Nuisance.—On petition of the mayors of Chelsea and Somerville, the State Board of Health has appointed a committee consisting of Drs. Henry C. Walcott, Boston; Hiram F. Mills, Lowell; Julian A. Mead, Watertown, and John W. Bartol, Boston, to investigate the problem of the foul odors originating in the New England Gas and Coke Works in Everett.

Appointments of Medical Examiners.—Governor Douglas has made the following appointments: Dr. Silas D. Presbrey, Taunton, Bristol County; Dr. Joseph G. Pinkham, Lynn, Essex County; Dr. Francis J. Canedy, Shelburne Falls, Franklin County; Dr. William G. Kimball, Huntington, Hampshire County; Dr. Francis A. Harris, Boston, Suffolk County; Dr. Henry R. Hitchcock Hyde Park, associate examiner of Norfolk County, and Dr. George F. Thompson, Belchertown, associate examiner of Hampshire County.

Government Hits Quacks.—Medical quacks who have flourished in Boston have been hard hit by the postoffice department. In the last six months about 50 have been suppressed. The latest ones are Dr. Joseph Grady, the Dr. Collins Medical Institute, the Dr. Herrick Medical Company and Dr. L. B. Williams. The last two are said to have large branches in other cities east and west. Their mail is intercepted, stamped "fraud," and, if possible, returned to the sendees. Payment of money orders is refused and mail, where senders are unknown, goes to the dead letter office. Some of these concerns are said to be taking in $2,000 a week.

MICHIGAN.

Sanitarium Burned.—The Grand Rapids Sanitarium was destroyed by fire May 15. All the patients were removed. The property loss is estimated at $15,000.

Commencement.—Michigan College of Medicine and Surgery, Detroit, graduated a class of 24, May 19. Prof. William A. Hackett delivered the doctorate address, and Dr. Hal C. Wyman, dean of the faculty, administered the Hippocratic oath.

Ill and Injured.—Dr. Gustav Nicolai, Detroit, suffered a skull fracture and other injuries in a fall from a street car, May 19, but is slowly recovering.——Dr. Wilbur Gillett, Detroit, has been declared insane and will be taken to a private hospital for treatment.

Washtenaw County Society Election.—At the annual meeting of the Washtenaw County Medical Society, held at Ann Arbor, May 24, the following officers were elected: *President,* Dr. John A. Wessinger; vice-president, Dr. Roger S. Morris, and secretary-treasurer, Dr John W. Keating, all of Ann Arbor.

Personal.—Dr. George Dock, Ann Arbor, left for the Pacific coast June 1.——Dr Charles J. Sorsen, Calumet, left for Europe June 6.——Dr. Christopher M. Kelly, Grand Rapids, has returned from Europe.——Dr. Clarence A. Traphagen, Armada, sailed for Europe May 20.——Dr. Edwin B. Forbes, Detroit, has been appointed a physician of Wayne County, vice Dr. Philip G. Sanderson, resigned.——Dr. Roy W. Chivers has been appointed health officer of Jackson.

MISSOURI.

Unlicensed Practitioner Fined.—In the case of the State of Missouri vs. John M. Davis, Memphis, for practicing medicine without a license, the jury found the defendant guilty and he was fined $50 and costs. He has appealed to the higher court.

Colleges Merge.—Ensworth and Central Medical College, St. Joseph, have consolidated under the name of the "Ensworth-Central Medical College." The officers of the board of trustees are: Dr. James W. Heddens, president; Dr. Thompson E. Potter, secretary; Dr. Charles R. Woodson, treasurer, and Dr. Jacob Geiger, dean.

Personal.—Dr. J. N. Barger, Darlington, has been made county physician of Gentry County, vice Dr. T. E. Graham, resigned.——Dr. Thomas H. Doyle, St. Joseph, has been appointed police commissioner of that city.——Dr William L. Whittington, St. Joseph, has been elected superintendent of the colony for epileptics and feeble-minded at Marshall, vice Dr. L. S. Thompson, resigned.——Dr. Porter E. Williams, Bunceton, has been elected superintendent of Hospital for Insane No. 1, Fulton, vice Dr. James W. Smith, resigned. Drs. J. Frank Harrison, Fulton; Edwin E. Evans, Hallsville, and W. C. Lewis of Pike County, were elected assistant physicians of the institution.——Dr. Harry S. Forgrave, St. Joseph, has been appointed local surgeon for the Rock Island System, vice Dr. Peter J. Kirschner, resigned.

St. Louis.

Hospital Dedicated.—St. Anne's Hospital, at Union and Page Avenues, was formally dedicated by Archbishop Glennon, June 3.

Successful Candidates.—Out of the 63 candidates who tried the competititve examination for interneship in the City Hospital the 32 who succeeded entered on their duties June 1.

Will Erect Medical Headquarters.—The St. Louis Medical Society will erect an auditorium on the lot adjoining the Medical Library, 3525 Pine Street, for use as assembly rooms for all the medical bodies of the city.

The Medical Department of Washington University held its graduation exercises May 25. Dr. Abraham Jacobi, New York City, delivered the commencement address on "The Modern Doctor." A class of 63 was graduated.

Personal.—Dr. Percy H. Swathen, senior assistant physician at the City Hospital, left his post June 1 for a two years' course in Vienna and Berlin.——Dr. Benjamin L. Dorsey has started for Europe.——Dr. Louis H. Behrens sailed for Europe May 31 for six months' post-graduate work.——Dr. William E. Sauer has sailed for Europe.——Dr. T. Casey Witherspoon has gone to Germany for the summer.——Dr. Eugene J. Neville has returned from a six months' trip abroad.

Appointments.—Health Commissioner Simon has submitted the following appointments for approval to the Board of Health: Assistant superintendent at the Female Hospital, Dr. M. C. Tuholske, who was senior physician at the institution last year; senior assistant physicians at the City Hospital, Drs. Thomas E. Graham, N. M. Freund, C. H. Shutt, Clarence Matlock, J. W. Shankland and J. V. Koch; at the Female Hospital, Drs. L. E. Messimore and A. H. Rohlfing and Jacob J. Singer.

City Hospital Superintendent vs. Health Commissioner.—The action of the health commissioner, Dr. J. H. Simon, in summarily dismissing the chief clerk of the City Hospital, Miss Elizabeth Rowan, without cause in the opinion of the City Hospital superintendent, Dr. John Young Brown, has caused quite a sensation. This clerk has been in service in the hospital for 11 years and has served with devotion and earnestness three superintendents. The health commissioner's only explanation for her dismissal was that the "politicians" were calling for a man for this job, and so he appointed a man, Henry Newmark, to fill the position.

NEW YORK.

Accepts Appropriation.—The directors of the Batavia Woman's Hospital have decided to accept the appropriation of $1,500 made by the legislature. The hospital will now come under the supervision of the State Board of Charities.

Against Tuberculosis Sanitarium.—Despite the efforts of the Board of Health to secure permission to locate a tuberculosis sanitarium near the town of Mamakating, the town board has decided against the project. It is said that the Board of Health will now endeavor to obtain a location in Orange County.

Personal.—Dr. Frank L. Washburn, Sherman, who was overcome by smoke during a fire last week, is seriously ill with pneumonia.——Dr. Charles A. Luce has been elected health officer of Amityville.——Dr. Henrich C. Leonhardt, North Tonawanda, who went to Porto Rico a few months ago, is seriously ill with fever at a hospital in San Juan.

Relief to State Hospitals.—The twelfth annual report of the State Charities Aid Association suggests the following improvements in state hospital management: The adoption of a plan of boarding out the harmless insane; improvement in the present unsatisfactory methods of deporting the alien insane; the employment of a dentist at every hospital for the insane; the early construction of the proposed reception hospital in New York, and the construction of a new hospital between New York and Poughkeepsie. The association also desires the employment at every hospital of a dietist who shall be a graduate of a normal domestic science school.

Druggist's Certificate in Danger.—Two of the changes in the excise law jeopardize not only the druggist's liquor tax, but also the state license to do business as a pharmacist, for one provides that whenever a liquor tax certificate of a licensed druggist or pharmacist is cancelled, such person shall, in *addition to the other penalties prescribed by this act, forfeit* the use of his license as such druggist or pharmacist for the term of one year, and be deprived of all rights and privileges thereunder during such period. The other bill repeals the act of 1903, which establishes a special tax stamp, which permitted druggists to sell liquor, in quantities of a pint or less, without a physician's. prescription.

The Insane of the State.—The number of insane persons in New York state hospitals and licensed private asylums increased nearly 1,000 in the last year, according to a report of the State Charities Association. The total number of insane persons in state hospitals and licensed state asylums on Oct. 1, 1904, was 26,861, an increase of 927. Of this total number 25,019 were in the 14 state hospitals, not including *Matteawan and Dannemara, or 832 more than in October,* 1903. The system of complete control, financial and administrative, by the state commission in lunacy, which has been in operation two and a half years, is not considered the wisest method of governing these institutions.

Buffalo.

Would Placard for Meningitis.—Health Commissioner Greene is attempting to have all houses in which cerebrospinal meningitis exists placarded. There have been several cases reported in various parts of the city.

Personal.—Dr. F. Park Lewis has been appointed a trustee of the New York State Institution for the Blind, Batavia. Dr. Lewis is at present serving as president of the board of managers.——Dr. Harvey Gaylord has been elected permanent chairman, and Dr. William Ward Plummer, secretary, of the Buffalo Medical Historical Club. Dr. Gaylord read a paper on "Johannes Müller," and Dr. Julius Ullman, a paper on "The History of the School of Salerno."——Dr. Walter Goodale has been appointed tenement house inspector for the Charity Organization Society.

Prominent in Civic Improvements.—Two Buffalo physicians deserve especial mention for the interest they are taking for the elevation and general improvement of civic matters. Dr. Ernest Wende is president of the Municipal League, which comprises among its members the best element of citizenship and has for its object the purification of municipal politics and the expurgation of municipal "graft." Dr. Matthew D. Mann is president of the Society for Beautifying Buffalo, which is doing excellent work toward improving the condition of trees and otherwise beautifying the city.

Health Report.—Health Commissoner Greene in his annual report for 1904 states that the death rate for the year was 14.31 per 1,000. The report says: "During the year there was an epidemic of typhoid fever. It was easily ascertained that the temporary condition of the water and to no other factor was this due, and that 90 per cent. occurred in families where the drinking water was not boiled." Mention is made of the scarlet fever epidemic from contaminated milk, and of measles, on account of which 36 deaths occurred in 2,349 cases. Tuberculosis continues its ravages with but slight amelioration of its mortality.

New York City.

Righteous Judgment.—A milk dealer was arrested for selling impure milk and was sentenced to five days' imprisonment in addition to a fine of $150.

The New Bellevue.—The Board of Estimate has finally approved the modified plans for the new Bellevue Hospital, which is to be built at a cost of $8,500,000.

A Low Death Rate.—The death rate for the week ended June 3 was equivalent to an annual mortality of 17.11 per 1,000. The mortality for the corresponding week of last year was 20.52 per 1,000.

Explosion in Hospital.—The explosion of a steam pipe attached to the sterilizing tank in the room adjoining the main operating room at the Presbyterian Hospital, May 29, caused considerable alarm but did little damage.

Long Island Graduates.—On June 1, 73 graduates of Long Island College Hospital, Brooklyn, received diplomas from

Dr. Joseph H. Raymond, secretary of the faculty. Dr. John A. McCorkle presided and administered the Hippocratic oath, and Borough President Littleton delivered the address to the class.

May Have to Tear Down Hospital.—The Supreme Court of Brooklyn has decided that the new addition to the scarlet fever pavilion of the Kingston Avenue Hospital, recently erected at a cost of $90,000, must be torn down, as it extends 55 feet into the street. The Board of Health has appealed from this decision.

Contagious Diseases.—There were reported to the sanitary bureau for the week ended May 27, 888 cases of measles, with 19 deaths; 470 cases of tuberculosis, with 163 deaths; 331 cases of diphtheria, with 26 deaths; 184 cases of scarlet fever, with 15 deaths; 76 cases of cerebrospinal meningitis, with 60 deaths; 32 cases of typhoid fever, with 4 deaths, and 141 cases of varicella.

PENNSYLVANIA.

Philadelphia.

Personal.—Dr. Boardman Reed and wife sailed for Europe June 3.——Dr. and Mrs. Milton Keim and Dr. and Mrs. Milton N. Keim Jr., will sail for Europe June 15, to be absent until October.

Resident Physicians.—The following have been appointed resident physicians at the Presbyterian Hospital: Drs. William F. Guilfoyle, Jr., A. Bruce Gill, H. McC. Snyder, A. H. O'Neal, F. D. Dickson and C. J. Hunt.

For Charity.—Miss Eliza Wood has donated $10,000 to the Home of the Merciful Savior for Crippled Children to endow two beds in perpetuity. To the rector of St. Matthias' Episcopal church has been given the privilege of selecting children to occupy these beds.

Correction.—Dr. J. H. Montgomery writes that the applications for positions on the resident staff of St. Vincent's Hospital, Erie, were received until June 10, and consequently that the item regarding an appointment in that institution which appeared in The Journal of June 3 was incorrect.

Health Report.—The total number of deaths from all causes for the week numbered 450, an increase of 50 over those reported last week, and an increase of 15 over those of the corresponding week of last year. There were 130 cases of typhoid fever reported, an increase of 27 over the previous week. The principal causes of death were: Typhoid fever, 13; diphtheria, 9; tuberculosis, 69; cancer, 20; apoplexy, 21; heart disease, 45; acute respiratory diseases, 35; enteritis, 28, and Bright's disease, 35. There were 275 cases of contagious diseases reported, with 23 deaths, as compared with 209 cases and 21 deaths for the preceding week.

Dr. Forbes Honored.—At the eightieth annual commencement of Jefferson Medical College, June 2, a life-sized oil portrait of Dr. William S. Forbes, professor of anatomy in the college, was presented by the alumni and present classes of the college to the board of trustees, to be placed in the "Hall of Fame of the College." The presentation address was made by Dr. Addinell Hewson, assistant professor of anatomy in the college, and the painting was received on behalf of the board of trustees by the Hon. William Potter, president. The painting is a tribute to Dr. Forbes and a manifestation of the high admiration and esteem in which he is held by the students and profession who have come in contact with him during his long years of service in the college. It was through the efforts of Dr Forbes that the state anatomical act was instituted in this commonwealth. As a further recognition of Dr. Forbes' worth the Medical Alumni Association of the University of Pennsylvania presented him with resolutions and a silver loving-cup as a mark of their esteem, and a tribute to his efforts in the field of anatomy. The resolutions and cup were presented by Dr. George A. Piersol, professor of anatomy in the medical department of the University.

Jefferson Alumni Meeting.—At the annual meeting of the Jefferson Medical College Alumni Association, June 1, the following officers were elected: President, Dr. George B. McClellan, Philadelphia; vice presidents, Alabama, Dr. Luther L. Hill, Montgomery; Arkansas, Dr. Charles H. Cargile, Bentonville; California, Dr. Joseph C. Hearne, San Diego; Colorado, Dr. Charles D. Spivak, Denver; Connecticut, Dr. William S. Keating, South Manchester; Delaware, Dr. Joseph C. Chandler, Centerville; District of Columbia, Dr. Thomas N. Vincent, Washington; Florida, Dr. Frank P. Walker, Jacksonville; Georgia, Dr. Henry F. Harris, Atlanta; Idaho, Dr. B. Frank Jones, Idaho Falls; Illinois, Dr. Frank C. Greene, Chicago; Indiana, Dr. Thomas C. Hood, Indianapolis; Iowa, Dr. Frank T. Seybert, Council Bluffs; Kansas, Dr. W. H. Bogle, Atchison; Kentucky, Dr. George B. Sprague, Lexington; Louisiana, Dr. Thomas B. Hopkins, Lafayette; Maine, Dr. Harry S. Emery, Portland; Maryland, Dr. Seth S. Ullrich, Baltimore; Massachusetts, Dr. John J. Flynn, Pittsfield; Michigan, Dr. Daniel La Ferte, Detroit; Minnesota, Dr. George C. Barton, Minneapolis; Mississippi, Dr. John W. King, Vicksburg; Missouri, Dr. William F. Kuhn, Kansas City; Montana, Dr. Thomas J. Murray, Butte; Nebraska, Dr. Harry McClanahan, Omaha; Nevada, Dr. Clarence H. Woods, Reno; New Hampshire, Dr. James R. May, Portsmouth; New Jersey, Dr. Daniel Strock, Camden; New Mexico, Dr. William R. Tipton, Las Vegas; New York, Dr. Thomas Addis Emmet, New York City; North Carolina, Dr. Robert Lardner Gibbon, Charlotte; North Dakota, Dr. John D. Heming; Ohio, Dr. Alonzo B. Walker, Canton; Pennsylvania, Drs. Percy C. Hoskins, West Chester; George B. Kalb, Erie; James L. Rea, Jacob O. Knipe, Norristown; James Van Buskirk, Philadelphia; Lewis W. Steinbach, Philadelphia; William M. Sweet, Philadelphia; Oklahoma, Dr. George A. La Motte, Oklahoma City; Oregon, Dr. Joseph R. Wetherbee, Portland; Rhode Island, Dr. John T. Farrell, Providence; South Carolina, Dr. James R. Ware, Greenville; South Dakota, Dr. Samuel A. Brown. Sioux Falls; Tennessee, Dr. Joseph A. Crook, Jackson; Texas, Dr. Adolph Herff, San Antonio; Utah, Dr. Archiemi De Rose, Vernal; Virginia, Dr. Thomas Dudley Merrick, Richmond; Washington, Dr. Nevin D. Pontius, Seattle; West Virginia, Dr. Sylvanus S. L. Spragg, Wheeling; Wisconsin, Dr. John W. Coon, Milwaukee; Wyoming, Dr. Otto K. Snyder, Cheyenne; Hawaii, Dr. Hubert Wood; Philippine Islands, Dr. Charles M. Gandy, U. S. Army; United States Army, Lieut. Louis Brechemin, M.D., Fort Baker, Sausalito, Cal.; United States Navy, Lieut. F. Clarence Ely, Colon, Panama; United States Marine-Hospital Service, Dr. George W. Stoner, Ellis Island, N. Y.; recording secretary, Dr. Charles S. Barnes, Philadelphia; corresponding secretary, Dr. Aller G. Ellis; treasurer, Dr. Randle C. Rosenberger, and chairman of executive committee, Dr. Ward Brinton, Philadelphia.

GENERAL.

Confederation of Licensing Boards Not to Meet at Portland.—The executive council and the president of the National Confederation of State Medical Examining and Licensing Boards have decided to postpone the annual meeting, set for July 10, at Portland, Ore. A meeting will be held later, most likely during the early part of the winter. The secretary is Dr. Felix A. Larue, New Orleans.

January Health Report for the Philippine Islands.—During the month there were 677 births recorded, 343 male and 334 female, representing an annual birth rate of 32.26 per thousand. The lowest birth rate is among the Chinese, and this may be explained, in part, by the fact that very few Chinese, proportionately, are married. Seven hundred and fifty-six deaths were recorded during January; of these 685 were of residents and 71 of transients. The greatest number of deaths from any one disease was 200, from convulsion of children; pulmonary tuberculosis caused 84 deaths, and chronic diarrhea and enteritis, 38. There were 28 deaths from simple meningitis.

State and Territorial Boards of Health.—The third annual conference of the state and territorial health officers with the United States Public Health and Marine-Hospital Service convened at Washington, D. C., May 15, 1905. Twenty-two delegates, representing as many states and territories, were in attendance. The principal subjects discussed were the national control of leprosy, the methods by which typhoid fever spreads, and car sanitation. Dr. John S. Fulton, Baltimore, secretary of the Maryland State Board of Health, stated that in some municipalities officials had been discovered selling the names of persons afflicted with consumption and other diseases to firms wishing lists of persons to whom samples of medicine might be sent. Dr. Edmund Souchon, New Orleans, introduced the following resolution, which was adopted by the conference:

> Whereas, the eradication of plague from California through the united and harmonious efforts of the United States Public Health and Marine-Hospital Service, state and local boards of health, by means of rat extermination and extensive sanitary improvements throughout the affected area, is an accomplished fact: *Therefore*, be it
>
> *Resolved*, That this conference of the United States Public Health and Marine-Hospital Service with the state boards of health expresses its entire satisfaction with the methods used and the results obtained.

The following officers were elected for the ensuing year: President, Dr. R. H. Lewis, North Carolina; vice-president, Dr. T. G. Kennedy, Iowa; treasurer, Dr. J. A. Egan, Springfield, Ill.; secretary, Dr. John S. Fulton, Baltimore.

Honor Grand Old Gynecologist.—About 125 physicians gathered at Delmonico's, New York City, May 29, to celebrate the seventy-seventh birthday anniversary of Dr. Thomas Addis Emmet. Dr. E. C. Dudley, Chicago, was toastmaster and made the introductory address. Dr. William M. Polk, New York City, spoke of Emmet as a surgeon; Right-Reverend John Farley, archbishop of New York, responded to the toast of Emmet as a writer on subjects apart from medicine; Dr. William H. Baker, Boston, considered Emmet as a teacher; Dr. Seth C. Gordon, Portland, Maine, referred to Emmet as a medical author; Dr. George T. Harrison, New York City, paid an eloquent tribute to Emmet as a friend; Dr. Francis J. Quinlan, New York City, discoursed on Emmet as a patriot, and Sir William H. Hingston, Montreal, expressed his pleasure at being privileged to be present to do honor to Emmet, whose name was so well known in Canada and abroad. Dr. Emmet in reply, gave a brief sketch of his early experiences.

CANADA.

Baptist Medical School for Toronto.—A report appeared in one of the Toronto newspapers a few days ago which stated that there is a strong possibility of the establishment of a new medical school in Toronto in connection with the University of McMaster, a Baptist institution.

University of Toronto News.—In the year just closed 652 medical students attended lectures at the University of Toronto. Medical college and hospital matters in Toronto today, it is understood, are being carefully considered both by the general hospital management and the senate of the University of Toronto, and there is every possibility of some important announcement being made in the immediate future, as it is understood that radical changes are contemplated.

Personal.—The Hon. Dr. R. A. Pyne, minister of education for the province of Ontario, and registrar of the Ontario College of Physicians and Surgeons, and Dr. J. Algernon Temple, professor of gynecology in the University of Toronto and formerly dean of Trinity Medical College, will receive the honorary degree of LL.D. from the University of Toronto on commencement day, June 9.——Dr. George H. Field, Coburg, Ont., has returned from a trip to the hospitals of Europe.——Dr. W. A. Young, managing editor of the *Canadian Journal of Medicine and Surgery*, Toronto, is at Atlantic City.——Mr. I. H. Cameron, professor of surgery in the University of Toronto, will spend the next three months in England and will attend the annual meeting of the British Medical Association at Leicester.——Dr. Carleton Jones, chairman of the committee of arrangements of the Canadian Medical Association, which meets at Halifax on August 22, has returned from Bermuda.——Dr. Charles O'Reilly, the retiring general superintendent of the Toronto General Hospital, will be tendered a banquet by the profession in Toronto and the province of Ontario on June 10 at the Albany Club, Toronto.——Dr. C. F. Martin, Montreal, associate professor of medicine in McGill University, has returned to Montreal from Washington, D. C.——Dr. O. M. Jones, Victoria, B. C., has gone to Europe for three months.

FOREIGN.

Congress of Medical Women.—The women physicians of Russia are planning a congress to be held this year at St. Petersburg.

Prophylaxis Against Malaria in Algiers.—The French government is undertaking a systematic campaign against malaria in the army stations in Algiers this coming season.

International Conference for the Protection of Wage-earners.—Nearly all the European countries were represented at this conference held at Berne last month. Among the resolutions adopted was one prohibiting wage-earning work for women at night, and another, the use of white phosphorus in the manufacture of matches.

Imprisonment for a German Irregular.—A former fish merchant of Lüneburg, named Kurzinski, advertised and sold a remedy which he claimed to be an absolutely certain cure for tuberculosis of the lungs. This claim was regarded as an attempt to deceive the public and he has recently been condemned to six years' imprisonment. This is the second or third prosecution for similar practices.

Swiss Law Against Marriage of Imbeciles.—A Swiss law, dated in 1874, forbids the marriage of dements and imbeciles. The latter term has been found too vague, and the revised code now limits marriage to persons capable of discernment (*die sich im Zustand der Urteilsfahigkeit befinden*). The clause prohibiting the marriage of dements is maintained, but the term imbeciles has been dropped, according to a recent subeditorial in the *Semaine Médicale*.

Plague at Port Said.—A case of plague was reported from Port Said during the first week in May. Plague in this port, the Mediterranean entrance to the Suez canal, where on an average 10 vessels pass every day, is naturally regarded with apprehension, not only because of the transit trade with the canal, but because of its large bonding warehouse trade and the importance of the port as a coaling station.

Lay Editor Fined for False Report of Diphtheria Epidemic.—The courts at Kiel have recently condemned the editor of a political journal for publishing a false report that diphtheria was epidemic. The medical experts testified that the false report had not caused any appreciable sensation, but the court decided that even if there had been no general alarm from it, the news was such as to cause a certain amount of anxiety.

The Formic Acid Sensation.—A member of the party of British physicians recently visiting Paris remarks that one of the most interesting sights there was the set of curves exhibited by Professor Huchard and others, showing the increase in their energy and endurance after taking formic acid. Our French exchanges lately have been teeming with articles commending formic acid as a stimulant and tonic or else ridiculing this revival of the old extracts of ants, "water of magmananimity," etc., of the seventeenth century pharmacopeias.

Professional Secrecy.—A German physician was recently condemned to a $5 fine for violation of professional secrecy, as was mentioned in THE JOURNAL at the time, page 803. He had warned a certain family to beware of a certain relative whom he knew to be in the contagious phase of syphilis. The relative brought suit against him, and he was fined as stated. Appeal to the supreme court, however, has resulted in the reversal of the decision, the court stating that the obligation to professional secrecy is not absolute. It is outranked under certain circumstances by professional duty. In the case in question there was no violation of medical secrecy as the danger to which the third parties (to whom he was family physician) were exposed justified him in his course of warning them of the existence in their relative of a "horrid contagious disease."

French Law on Dangerous Trades.—The French legislation on indemnities for industrial accidents (1898), excluded from the benefits of the law the so-called "professional affections" almost inevitably associated with the exercise of certain trades. Time has shown, however, the *Semaine Médicale* observes, that certain accidental affections, such as syphilis among glassblowers from the use of instruments in common, and malignant pustule among tanners, have to be included among those calling for an indemnity. The only affections now excluded are those which are the slow, certain and almost fatal consequence of the practice of the trade in question. The authorities have been collecting data on this subject during the last four years, and a bill has recently been presented to the parliament bearing on the dangerous trades using lead and mercury. The *Semaine* remarks that in these trades the right of the state to interfere should be restricted to the enforcement of sanitary and other measures to guard the workmen against poisoning. When the proprietor conforms to these measures his responsibility ceases, the workman knowing that the trade he follows is a dangerous one for the health.

LONDON LETTER.

The Financial Relations Between the London Hospitals and Medical Schools.

At the annual conversazione of the Medical Society of London, Mr. Henry Morris delivered the oration for the year on a subject which has become a burning question—the financial relations between the London hospitals and the associated medical schools, and the bearing of these relations on medical education. Until the last decade the medical schools of London have been practically self-supporting, but the need for the teaching of recent extensions of science has made this no longer practicable. Two schemes have been formulated to meet the difficulty—one, a self-supporting amalgamating scheme to include the existing medical schools, and the other, an appeal to the public for funds to be applied to medical education to be administered in connection with the University of London. Referring to the instruction of the King's Hospital Fund, based on the finding of its medical school committee (which has been reported in THE JOURNAL), that none of this fund should be applied to medical education, he maintained that here were good reasons why some part of the incomes of hospitals should be devoted to the associated medical school, in view of the wishes of donors that as much good as possible should be done by means of their contributions. This idea, he held, would take in the matter of medical education, for the sick poor benefited by the training given in the schools, not merely within the walls of the hospitals, but to a much greater extent outside. The medical schools are an integral part of the machinery for helping the poor. Moreover, if the school fees are raised so as to remunerate adequately the teachers, rich men alone could afford to enter the profession. As the supply of physicians, therefore, would be diminished, the poor would inevitably be to some extent neglected. He vigorously combatted the idea of the committee of the King's Hospital Fund that the hospitals by providing the so-called "clinical material," sufficiently requited the obligation of the schools. He hoped that those hospitals which suffered by this new regulation would at once establish separate medical school funds. At the London Hospital such a fund has already been instituted, and during the first week of its existence the sum transferred to it by supporters of the hospital was more than twice the sum ever contributed by the hospital to the school. Referring to the proposed delegation of the teaching of pure science to an institute of medical sciences, he maintained that the only teaching from which the medical schools should be relieved was that of physics, chemistry and biology, and that an examination on these subjects should be passed before the fifth year's medical curriculum was begun.

Bubonic Plague at Leith.

Bubonic plague has broken out at Leith, an important Scotch seaport town. The first case occurred in a tenement house near the docks. The patient was a laborer employed in the reconstruction of the Leith tramways; his wife worked in a rag store. He became ill a week ago, and when his condition became serious the health officer ordered his removal to an isolation ward in a hospital where he developed unmistakable symptoms of bubonic plague and died. Energetic measures have been taken to prevent the spread of the disease. The man's wife and two children and the remaining inhabitants of the tenement numbering 25 in all were removed and isolated. The hypothesis put forward as to the origin of the disease is that some affected rats were concealed in the rags imported from the East but the owners of the store where the man's wife worked say that they have not imported eastern rags for years and that it is almost impossible for rats to be concealed in the rags which as a rule are hydraulically pressed before shipment. The health officer has issued a circular to shipowners requesting that fenders be placed on all ropes connecting vessels with the quays and that all gangways be withdrawn at night in order to prevent rats gaining access to ships from the shore.

Telephones and Infectious Diseases.

From time to time scares have been raised in the lay press as to the danger of transmitting diseases by the mouthpieces of the telephones. Tuberculosis and diphtheria were particularly mentioned. In order to investigate the matter Dr. Collingridge, health officer of the city of London, removed the twelve mouthpieces from various call offices and sent them to Dr. Klein for bacteriologic examination. The latter after conducting experiments with guinea-pigs, reported that none of the mouthpieces contained either tubercle or diphtheria bacilli. Dr. Collingridge, therefore, concludes that in the use of the telephone there is no risk of acquiring infectious diseases. But he calls attention to the fact that the various public telephone offices are very badly ventilated.

Death of Dr. Dutton of the Liverpool School of Tropical Medicine.

The Liverpool School of Tropical Medicine has for the second time lost one of its most promising workers while he was engaged in one of its expeditions for the investigation of tropical diseases. It may be remembered that in 1901 Dr. Walter Myers, while studying tropical diseases, contracted yellow fever at Para and died. In his memory a Walter Myers fellowship was founded by the Liverpool school. The sad news has been received that Dr. Dutton, who was appointed to this fellowship, has suddenly died in the Congo while investigating trypanosomiasis and tick fever. In 1903, accompanied by Dr. Todd, he proceeded to the Congo. Toward the end of 1904 they were able to demonstrate independently the cause of tick fever in man—a discovery made a few weeks previously by Ross and Milne in Uganda. Further, they demonstrated the transference of the disease from man to monkeys by means of a peculiar species of tick. During the investigation they both contracted the disease. Dr. Dutton had not attained the age of 30 and yet had made a name as an investigator of tropical diseases that was famous throughout the world. His first expedition to West Africa took place in 1900, when, with Drs. Annett and Elliott of Toronto, he visited Nigeria in order to study the bionomic of the anopheles and measures for the prevention of malaria. The expedition issued two reports, one on antimalaria sanitation and the other one of the most complete monographs on filariasis published. In 1901 Dr. Dutton proceeded alone to the Gambia and drew up a most comprehensive report on the prevention of malaria. He also discovered for the first time a trypanosome in human blood. Hitherto the organism had been known only in the blood of animals. This organism was that subsequently shown to be the cause of sleeping sickness (*T. gambiense*). He also described several other trypanosomes which were new to science. In 1902 he proceeded with Dr. Todd to Senegambia and drew up a report on sanitation which was presented to the French government. He had charge of the present expedition to the Congo, which was sent out in 1903, and was accompanied by Dr. Todd and Dr. Christy. The expedition had made many valuable observations while tracing sleeping sickness along the river banks and investigated the nature of tick fever and filariasis. A most promising life and brilliant career have been cut short.

The Centenary of the Royal Medical and Chirurgical Society.

The greatest of the English medical societies has celebrated its centenary in a manner worthy of its history and position. The proceedings commenced with the admission as honorary fellows of Dr. Christian Bohr, Sir William Ramsay, Dr. Robert Barnes, and Dr. Walter Gaskell. The president, Sir Douglas Powell delivered an address in which he congratulated the society on the part of its past presidents now living, on the part of the council and himself on its completion of the hundredth year of its existence. He referred to the volume just issued by the honorary secretary, Mr. Stephen Paget, in which the chronicles of the society are most interestingly set forth and which contains a sketch of the lives of its fifty presidents by the honorary librarian, Dr. Norman Moore. These chronicles are an epitomized history of the medicine and surgery of the past century. In the first half of the century they deal with many great incidents in medicine and surgery and in the second with great developmental movements in pathology and therapeutics. Among notable achievements the president referred particularly to the papers describing Astley Cooper's ligature of the common carotid artery, Dundas' description of acute rheumatic pericarditis and endocarditis, and Abernethey's account of mitral stenosis. When the Napoleonic wars were raging the society was receiving papers from its Fellow, and later President, Sir Gilbert Blane whose introduction of lime juice for the prevention of scurvy saved more lives than were lost in all the naval battles. Sir B. Brodie in 1836 by his temperature records of a fatal case of luxation of the cervical vertebræ with destructive hemorrhage into the upper cord demonstrated what his earlier experiments of 1811 had led him to believe, and had been guessed by John Hunter, that fever was neither a mere matter of altered circulation, as the older physicians had thought, nor of oxidation as the physiologists after Lavoisier were teaching, but that it was dependent on some other controlling factor probably of nervous origin. How otherwise could be explained a rise of temperature to 112° in a man dying with respirations reduced to less than six a minute? This was the earliest instance of the use of the clinical thermometer. During Bright's presidency in 1838 Bostock read his paper on the clinical examination of the urine and initiated an important development of clinical pathology. Dr Webster's paper in 1843 on the "Brutal Treatment of the Insane" then prevailing was the forerunner of the more humane methods of Conolly. The paper by Roe and Thompson in 1835 on "Paracentesis for Empyema" was the beginning of a great advance in thoracic therapeutics. Then followed John Hutchinson on "The Spirometer," John Marshall on "The Galvanocautery," Golding-Bird and Hilton on "Operation for Internal Strangulation," in 1846-47, Kirkes on the "Detachment of Fibrinous Clots from the Interior of the Heart and Their Mixture with the Circulating Fluid," and Spencer Wells' first five cases of ovariotomy. In the second half of the century among the most important papers were Fenwick's, on the "Microscopic Examination of the Sputum," Marcet's, on the "Inoculation of Sputum in the Diagnosis of Tuberculosis," Hutchinson's, on "Vaccino-Syphilis," in 1871, and Ord's, on "Myxedema," in 1877. After the address, Professor Chin on behalf of the Medico-Chirurgical Society of Edinburgh, Mr. Langton on behalf of the Medical Society of London, Dr. Frederick Taylor on behalf of the Clinical Society, Dr. Boxall on behalf of the Obstetrical Society, and Mr. Symonds on behalf of the Laryngological Society, congratulated the Fellows of the Royal Medical and Chirurgical Society on the attainment of its centenary. The banquet which followed was attended by a number of distinguished guests, including the Prince of Wales, Prof. Clifford Allbut, Right Hon. John Morley. A conversazione was held at the Natural History Museum and was attended by some thousands of persons. Amongst those present was Senor Manuel Garcia who, as recently reported in THE JOURNAL, has just celebrated his centenary.

Medical Plants.

At the Royal Horticultural Society a lecture illustrated by lantern slides was delivered by Mr. E. Morrell Holmes on "Medical Plants Old and New" which, in view of the celebration of the Centenary of the Royal Medical and Chirurgical Society, was both opportune and interesting. The lecturer pointed out that although horticulture must have begun at a very early period of civilzation, the plants required for medicinal use were chiefly collected from the fields and woods and were not specially cultivated, except those which, like the pomegranate and almond, afforded edible fruits, and like henna were planted for their fragrance, and like the lily for their beauty. Even in the time of the Greeks and Romans, although horticulture had made great strides and pipless apples and long grapes were known, violets and roses were found in winter, yet there is no record of distinct physic gardens. *It was only in the records of monasteries, abbeys,* and nunneries in the Middle Ages, that we found any mention of a physic garden or portion set apart for the cultivation of medicinal herbs, usually near the surgeon's residence and distinct from another portion of the garden, retained for culinary herbs. One of the first lists of plants cultivated in these physic gardens was given in the "Capitulary of Charlemagne." Subsequently, wealthy citizens had physic gardens, and during the reigns of the Tudors there were physic gardens under the charge of the apothecary who attended royalty. Private physic gardens were followed by municipal physic gardens, and these developed into the modern botanical gardens to which modern horticulture owes so much. Descriptive catalogues of the plants grown in these gardens and containing an account of their medicinal properties were published by their owners, and form the herbals on which domestic medical treatment was based until the early part of the last century, when a large number of medical plants described in them were omitted from the pharmacopeias, and the herbals were succeeded by more advanced work on the medicinal plants and the pharmacopeias. During the last half of the eighteenth century the growth of the population led to increased demand for medicinal plants and their preparations, and the cultivation of these was carried on on an agricultural rather than on a horticultural scale. The increasing use of quinin led to cultivation of chinchona bark on a large scale in India and Ceylon, followed by that of coca in various colonies. The lecturer also alluded to the cultivation of Indian hemp for medicinal purposes and to the ancient and more extensive cultivation of the opium poppy in various countries.

Correspondence

"Works But Not Words."

BISMARCK, N. D., June 3, 1905.

To the Editor: I failed to see Mr. Bok's letter in THE JOURNAL, May 20, 1905, until my attention was drawn to it at the meeting of the House of Delegates of our state association.

Mr. Bok complains of the apathy of individual physicians and medical societies in not appearing before legislative committees on behalf of pure-drug laws, introduced in different legislatures last winter, and states that within his own knowledge not a single physician or representative of a medical society appeared before such a committee.

While this may be true generally, it does not apply in this state to the bill introduced and passed in our legislature, prohibiting the adulteration of drugs and providing for the printing of the ingredients, in case of poisons and other dangerous substances, on the labels of proprietary medicines. My attention was first drawn to this bill when appearing before the public health committee of the House of Representatives, in opposition to a so-called pure-food bill, the effect of *which* would have been completely to nullify the good work that has been done for the past two years by our pure-food commissioner. I appeared by authority of the council of our state medical association and was received with courtesy by the committee. After I had presented the case on behalf of our association, my opinion was asked as to the pure-drug bill that had been introduced and also as to another pure-food bill that had been introduced in the senate. I had to reply that I had not seen either of the bills and knew nothing of their provisions, but agreed to examine them and to appear again before the committee, when it met to consider the bills, the date being fixed for the following week. I forwarded copies of the bills to the secretary of the state association, asking him to bring them before the president and other members and to use his influence in favor of their passage. I also saw some of the registered pharmacists of this city and as many of the members of the legislature as I could and pointed out the advantages of the bills and prepared myself to go before the committee. Before the time came for the committee to meet, the legislature adjourned for a week and I received no notice of the new time of meeting, but as sentiment, in the public press and among the members, was almost unanimously in favor of the proposed laws it was not necessary for me to take a more active part, and, *in fact, by doing so I should* probably have caused more opposition, as representatives of the patent medicine interests would have argued that physicians were supporting the bill for selfish reasons.

The credit of introducing the bills is entirely due to our energetic pure-food commissioner, Prof. E. F. Ladd of the North Dakota Agricultural College, and it was a worthy tribute to his efficiency to have members of the legislature tell me that they were satisfied that the bills were all right, as Professor Ladd was supporting them.

I do not know how it is in other states, but here it is difficult to find out when a committee is going to consider any particular bill, and in one case last winter, after the chairman of a committee had promised to give me notice when his committee would consider a bill, containing a provision allowing communities to discharge unpurified sewage into streams and rivers, and I had remained in my office for two or three mornings waiting for a notice by telephone, I was informed that the bill was passed. In this case not a single member, that I spoke to, knew of this provision in the bill, but simply accepted the report of the committee recommending that the bill pass.

I agree with Mr. Bok that it is the duty of medical associations to take an active and leading part in promoting legislation bearing on the public health, and our state association can point with pride to the fact that all the legislation that is asked for, including an almost new medical law providing for reciprocity in exchange of licenses, an anatomic law, and a law establishing a state bacteriologic laboratory—this last was vetoed by the governor on account of the appropriations exceeding the available funds—was passed. Having been a member of the legislative committee for the past ten years, I can testify that under the new system of organization the medical societies can exert more influence than formerly.

F. R. SMYTH,
Chairman Committee on Legislation and Public Policy,
North Dakota State Medical Association.

Climate in Treatment of Tuberculosis.

EL PASO, TEXAS, May 30, 1905.

To the Editor: In the proceedings of the Illinois State Medical Society meeting (THE JOURNAL, May 27, p. 1706), I notice that Dr. J. W. Pettit, Ottawa, Ill., is reported to have said, in his article on tuberculosis, that "climate is an unimportant factor in the treatment of tuberculosis," and that "it has been demonstrated that the tent is practicable in cold climates." In the same issue, in the transactions of the National Association for the Study and Prevention of Tuberculosis, Dr. William Osler is quoted as saying: "The education of the profession includes three points: 1. They must *know that* early recognition is the first and most important thing. 2. They must recognize, practically, the efficiency of open-air treatment. 3. They must educate medical students;

this is of paramount importance." Mr. William H. Baldwin, Washington, in a paper at the same meeting, said: "1. Climate is not an essential, nor even the most important feature" in the treatment of tuberculosis. 2. "Necessities are fresh air, rest, nourishing food and regular habits."

The statements of Dr. Pettit and Mr. Baldwin are very frequently made. One statement made by each man is contradictory to his own statement just preceding, both making the statement that climate is unessential, and following it by immediately making open-air treatment one of the greatest essentials. Now, if open air is one of the greatest essentials, as emphasized by both of these men, and also by Dr. Osler, why does it not necessarily follow that the preferable climate is that in which the patient can get the most of this open air? If open air and sunshine are essentials, why is it not better that the patient be where he may have from 82 to 84 per cent. of possible sunshine, as is stated by the government report to occur at Phoenix and Tucson, Arizona, and El Paso, Texas, and at other points in the arid Southwest, instead of being in Chicago, with a possible sunshine of 53.6 per cent., or in New York, with a possible sunshine of 59 per cent; also why should not the patient be where there are only 37 cloudy days out of 365, as given by the government reports at the above-named points in Arizona and Texas instead of in Chicago, with 107, or New York, with 118, or St. Louis, with 117 cloudy days in the year?

Also, if being out of doors in the open air is an essential, is it not probable that the patient will be in the open air more in a climate where there is only an average mean rainfall of 7 inches a year, as at any of the above-named places in Arizona and Texas, than in Chicago, with an average mean rainfall of 30 inches, or in New York, with 42, or in Indianapolis, with 40 inches per year? Is it not probable that the patient will be in the open air more in a vicinity where there is never any snow, or only a trace, than he will be in Chicago, with an average yearly snowfall of 35 inches, or New York, with 26 inches, or Kansas City, with 31 inches?

I am glad to see emphasis laid on the point that an early diagnosis should be made; that diet and proper care are essentials in the treatment of tuberculosis; and, leaving out all arguments as to the questions of altitude, humidity, and electrical phenomena, I wish to emphasize that the location for a tuberculous patient is preferably where he may have the benefit of open air and sunshine the maximum number of hours out of the twenty-four, without exposing himself to unnecessary discomforts and inclement weather.

When this question is given some thought along these lines, I think the statement will not so frequently be made that there is nothing in climate in the treatment of tuberculosis, as my interpretation of a good climate is simply one where the patient can be out of doors most.

W. Launcelot Brown, M.D.

Cesarean Section for Placenta Prævia.

Omaha, Neb., May 30, 1905.

To the Editor:—In Dr. Holmes' article on section for placenta prævia in The Journal, May 20, appears this assertion concerning the Catholic Church's doctrine anent extrauterine pregnancy: "The profession may not know it, but the church prohibits operation for extrauterine pregnancy; this prohibition would not be countenanced by physicians."

I do not suppose for a moment that the writer intends the latter part of this assertion for Catholic physicians who look on that church as their teacher and guide in questions of faith and morals; and as there is a moral principle involved in this, as well as in kindred operations, they must, if true to their religious belief, follow the wise decisions of the church.

But apart from this, and not in a spirit of controversy, let me ask is not Dr. Holmes' statement, "The church prohibits operation for extrauterine pregnancy," somewhat misleading, put forth, as it is, in such general terms? Is it altogether true? The words of the church in deciding the case will answer the question so plainly that he who runs may read.

The court's decision, given on the fourth of May, 1898, is as follows: "In a case of necessity, laparotomy and Cesarean section are allowable in extrauterine pregnancy, or in ectopic conception, on condition that, as much as can be, the lives of the fetus and of the mother are carefully considered and protected."

In face of this pronouncement, the alleged statement of Dr. Holmes is not correct. The church does prohibit every kind of operation before the period of viability, otherwise the life of the fetus would not be carefully protected, a life that in the eyes of the church is as valuable and sacred as that of the mother. So, too, is the induction of premature labor either in intrauterine or extrauterine pregnancy regarded by the church as not only lawful but meritorious on the part of the physician when the child is viable; and this, too, whether the necessity arises from contraction of the pelvis, from tumors contracting its cavity, from abnormal size of the child, from death of the fetus, from diseases of the mother dependent on pregnancy or aggravated by it, and threatening the mother's life.

This is the doctrine of the Catholic Church. She condemns any action or operation that has for its object or aims at the destruction of the fetus for the safety of the mother. She holds that the infant within the womb has an inalienable right to life as much as the infant on its mother's lap, as much as the mother herself, and, therefore, in her teaching regarding operations, does she forbid strongly any and all that tend directly to destroy the life of the fetus.

W. P. Whelan,
Professor of Medical Jurisprudence,
Creighton Medical College.

A Section on Tropical Diseases.

Philadelphia, June 1, 1905.

To the Editor:—The Section on Tropical Diseases of the British Medical Association, organized a few years ago through the efforts of Dr. Sandwith of Cairo, has proved a noteworthy success. The meetings have been largely attended and the discussions have excited wide interest among the members of the association who represent the medicine of Great Britain in the tropical outposts and those at home. The subjects selected for the successive meetings have been of very general interest. This year they are as follows: For the first day, "Tick Fever"; second, "Sprue and Hill Diarrhea"; for the third, "Tropical Diseases of the Skin."

While our national interests in the tropics are of comparatively recent date and much less extended than those of Great Britain, they are sufficiently important to make it in the highest degree desirable that a section on tropical diseases should be organized in connection with the American Medical Association, and this I earnestly hope will be done at the coming session. This suggestion is based chiefly on the obvious necessity for a common ground in which matters relating to tropical medicine may be discussed at the sessions.

The subjects directly related to tropical medicine fall chiefly under the heads of pathology and bacteriology, practice of medicine, cutaneous medicine and public and personal hygiene. Yet papers on these subjects from the standpoint of practitioners having experience in the tropics, on the one hand, and of those looking forward to medical work in tropical climates, on the other hand, if read in existing sections would occupy time which a majority of those present could utilize in more congenial work, while if read in a special section they could not fail to attract a body of interested men which would become larger from year to year, as the scope and purpose of such a section become more evident.

Courses on tropical diseases, which have been delivered in the Jefferson Medical College, first by Captain Kiefer and later by Major McCall, have been highly successful. Attendance has been voluntary and there were no examinations, but the interest manifested by the students was remarkable and many practitioners availed themselves of the opportunity of being present.

It is to be hoped that this matter will be thoroughly considered by the House of Delegates.

J. C. Wilson.

Proposed American Medical Insurance Company.

Fort Wayne, Ind., June 1, 1905.

To the Editor:—In view of the approaching meeting of the American Medical Association, I wish to make a suggestion in regard to the relief of the "wounded soldiers of the war"—that is, those of our profession who, through age, illness, accident or other not discreditable cause, have been reduced to exiguous circumstances at the closing of their careers.

Probably the best way by which this philanthropic purpose can be accomplished is by the organization of an American medical insurance company. We note many large companies handling vast sums of money and making immense profits. If members of the Association were generally interested in an insurance company of their own they could make it a great success, as they have accumulated a great fund of valuable experience relating to insurance matters. Part of the profits of the company might be used in paying small annuities to the objects of this benevolent enterprise. The company would also provide moderately costly insurance rates and favorable options for members, and would, of course, accept business outside of the profession. It would be able to secure best actuarial and managing talent, and all physicians would be interested in making it a success. W. P. Whery, M.D.

Association News

The Portland Session.

Attention is called to the fact that the last issue of The Journal, June 3, contained nineteen pages devoted to the Portland session, the attractions en route, the railroad rates, routes, trains, the hotels, meeting places, etc., with sixteen illustrations. Additional information will be published in this department from week to week. We repeat the reminder that reservations on trains and hotel accommodations in Portland should be secured now.

Chicago Medical Society Special.

Reservations on this train may be made through Drs. A. E. Halstead, 103 State St., or M. L. Harris, 100 State St., in addition to Dr. F. X. Walls, 103 State St., and Mr. C. A. Matthews, 208 S. Clark St., all of Chicago. The train leaves Thursday, July 6, at 7:30 p. m. and reaches Portland Monday, July 10, at 8 a. m.

Welcome to Spokane on the Portland Trip.

Spokane, Wash., June 1, 1905.

To the Editor:—The Spokane County Medical Society extends a cordial invitation to physicians to stop off at Spokane, either going to or returning from the Portland session. We will provide entertainment for all who come. We want you to see our beautiful city. Write or wire date, time you can spend in Spokane and number in party.

William L. Hall, Secretary,
209 Empire State Building, Spokane, Wash.

Welcome to Portland.

The Portland (Ore.) City and County Medical Society will take the greatest interest in making pleasant the visit of the physicians from other parts of the United States. At the annual meeting, just held, Dr. Henry Waldo Coe, editor of the *Medical Sentinel*, was elected president. The society feels that this is an important year for it, as it will have charge of one of the most important social functions of the session of the American Medical Association. Dr. Coe has appointed committees that will act with the local Committee of Arrangements.

Cordial Greeting from the Seattle Profession.

Seattle, Wash., May 29, 1905.

To the Editor:—The medical profession of Seattle is anxious to extend all possible courtesies to the members of the American Medical Association and their families either on their way to the Portland session or returning therefrom. It will be our endeavor to make their stay in our city, whether it be lengthy or brief, as pleasant and interesting as the time will permit.

That we may be enabled to afford our visitors such attention as we desire it will be necessary for the secretaries, chairmen or managers of parties to notify us as soon as possible of: 1. The date of arrival in Seattle. 2. The length of time to be spent in Seattle. 3. The number in the party. 4. The number of ladies.

If those in charge of parties will advise us on these points it will be our pleasure to extend to them a most cordial welcome.

J. H. Lyons,
President of King County Medical Society.

Excursion to Los Angeles—Pennsylvania Alumni Reunion.

Los Angeles, Cal., June 1, 1905.

To the Editor:—The Alumni Association of the University of Pennsylvania of the Pacific Southwest will give to visiting *alumni a reunion and banquet at the California Club*, Los Angeles, Cal., on the evening of July 25, 1905. This date was chosen because there will be an excursion to members of the American Medical Association from Portland, reaching Los Angeles July 24, and it is hoped that as many as can will avail themselves of the opportunity to meet their classmates of former years. It is intended to have present as guests Drs. John A. Musser, and Vice Provost Edgar F. Smith of the University of Pennsylvania, besides other notable men, who will give addresses. It is expected of alumni that they will co-operate in order to make this a grand success. Charge per plate will probably be five dollars.

Kindly address the undersigned for further particulars.

C. G. Stivers, M.D.,
Secretary University Pennsylvania Alumni Association of the Pacific Southwest.

NEW MEMBERS.

List of new members of the American Medical Association during the month of May, 1905:

ALABAMA.

Baker, J. N., Montgomery.
Dennis, D. R., Arley.
Frazer, T. H., Mobile.
Glass, E. T., Birmingham.
Huey, T. F., West Blocton.
Lusk, P. B., Guntersville.

ARIZONA.

Caven, C. L., Bisbee.
Edmundson, C. L., Bisbee.
Frazer, Alex. I., Kofa.
Fanning, G. J., Prescott.
Sawyer, F. W., Prescott.
Yount, C. E. Prescott.

ARKANSAS.

Blankenship, W. H., Pine Bluff.
Butler, J. L., Sheridan.
Dickinson, W. H., Emmet.
Gant, Jas. Robt., Ft. Smith.
Johnson, Dave T., Ft. Smith.
Jelks, James T., Hot Springs.
McCurry, W. T., Texarkana.
Merritt, L. H., Forrest City.

CALIFORNIA.

Alden, B. F., San Francisco.
Bonar, R. M., Santa Rosa.
Besson, E. A., San Francisco.
Buchanan, R. A., San Francisco.
Butler, T. P., San Diego.
Bullock, R. R., San Francisco.
Beyer, Herman, Oreano.
Condit, J. D., Pasadena.
Chancellor, P. S., Santa Barbara.
Casey, Philip F., San Quentin.
Deal, Louise B., San Francisco.
Fouch, Albert, Sutter.
Fields, David Blackstone, Weaverville.
Foulkes, Bruce, San Francisco.
Felt, Rae, Eureka.
Goodman, Minerva, Stockton.
Gunn, John William, Jr., San Francisco.
Howard, Edw. S., San Francisco.
Hamman, A. F., Long Beach.
Helgesen, Segrid, Templeton.
Hawkins, W. J., San Francisco.
Jordan, P. A., San Jose.
Jenks, C. A., Los Angeles.
Lynne, M. A. A., Napa.
Legge, Robt. T., Redding.
McLeod, J. H., Santa Rosa.
Morse F. W., San Francisco.
Moffitt, H. C., San Francisco.
McCleave, T. C., Berkeley.
Meneray, Prince A., Santa Rosa.
Peery, T. P., Yuba City.
Pierce, Clarence, Los Angeles.
Perdue, L. C., Chico.
Pierce, R. E., San Jose.
Stevenson, G. L., Sacramento.
Seibert, F. M., San Mateo.
Toland, M. R., Los Angeles.
White, J. Francis, East Auburn.
Watt, George, Orland.
Williams, Ralph, Los Angeles.
Williams, Annie W., Gonzales.
Young, W. J., Stockton.

COLORADO.

Brown, Joseph M., Akron.
Hereford, J. H., Cripple Creek.
Hanford, P. O., Colorado Springs.
McGill, E. D., Wray.
Pascoe, J. N., Silverton.
Pogue, George R., Greeley.

CONNECTICUT.

Kilbourn, Joseph A., Hartford.
Reeks, T. E., New Britain.
Rundlett, David Livingston, New Haven.
Williams, Allen H., Hartford.

DISTRICT OF COLUMBIA.

Beyer, H. G., U. S. Navy, Washington.
Curriden, G. A., Washington.

FLORIDA.

Ferris, F. F., Apalachicola.
McCall, C. P., Lemont.
McEachern, J. R., Monticello.
Thomas, R. Y. H., Jacksonville.

GEORGIA.

Funkhauser, W. L., Rome.
Richardson, E. H., Atlanta.
Roberts, S. R., Oxford.
Sullivan, J. S., Macon.
Wicker, R. H., Rome.
Wheeler, A. E., Atlanta.

HAWAIIAN TERRITORY.

De Faria, J. B., Honolulu.
Walters, St. David G., Honolulu.

IDAHO.

Burke, E. L., Culdesac.
Collins, I. S., Burke.
Noth, R. F., Minidoka.

ILLINOIS.

Allen, E., Sheldon.
Blomgren, C. E., Chicago.
Bartholomew, J. K., Chicago.
Brown, E. V. L., Chicago.
Biankini, A., Chicago.
Blazer, M. S., Manito.
Ball, A. W., Rushville.
Cupler, R. C., Chicago.
Davis, W. J. N., Chicago.
Daley, W. H., Chicago.
Day, J. A., Jacksonville.
Daniel, O. L., Murphysboro.
Edward, J. T., Chicago.
Eddy, J. H., Decatur.
Evensen, H. O., Ottawa.
Flatt, Stephen, Hardin.
Gregory, E. H., Chicago.
Gibson, A. Tilden, Morrisonville.
Gramm, Carl T., Chicago.
Harms, A. H., Sterling.
Hemingway, C. E., Oak Park.
Isham, I. D., Chicago.
Johnson, A. L., Prophetstown.
Kradwell, W. T., Joliet.
Kearsley, Mary J., Chicago.
Lunn, S. J., Chicago.
Lantz, Ida R., Oak Park.
McIntyre, George, Chicago.
McDeed, Winfield G., De Land.
Mangum, Wm. R., Buncombe.
McLaughlin, J. J., Chicago.
McKenney, G. M., Oregon.
Menn, Rudolph, Chicago.
O'Hara, F. S., Springfield.
Proudfoot, Alexander, Chicago.
Pusey, C. M., Chicago.
Parker, Wm., Mt. Sterling.
Renfrew, F. C., Sadorus.
Rees, Wm., St. Joseph.
Sweeney, J. L., Chicago.
Semple, W. F., Chicago.
Simmons, Albert C., Girard.
Snow, Frederick H., Chadwick.
Shastid, T. H., Harrisburg.
Sheppard, L. D., Chicago.
Warner, Arthur K., Chicago.
Walton, T. E., Danville.
Windsor, B. P., Mt. Auburn.
Young, C. O., Chicago.

INDIANA.

Abbott, Clarence, Otwell.
Busse, E. P., Evansville.
Cohen, David, Jeffersonville.
Cox, Lafayette T., Napoleon.
Cook, John W., Pendleton.
Duemling, Hermann A., Ft. Wayne.
Daniel, Wm., Corydon.
Dewey, E. L., Hammond.
Ford, O. P. M., Rising Sun.
Grayston, B. H. B., Huntington.
Jenkins, M. J., Richmond.
Knabe, Helene, Indianapolis.
Kennedy, Bernays, Indianapolis.
McDonald, A. J., Bedford.
Osterman, A. T., Seymour.
Smith, W. H., Bedford.
Shonkwiler, F. Marion, New Market.
Sloan, Wm. W., French Lick.
Schreiber, A. W., Lafayette.
Westfall, Arthur B., Lafayette.

INDIAN TERRITORY.

Booth, T. S., Ardmore.

IOWA.

Aschenbrenner, Carl F., Dysart.
Appel, Fred L., Muscatine.
Benedict, Chas. C., Menlo.
Beatty, E. D., Mallard.
Brann, J. V., Knoxville.
Brink, Milber, Boyden.
Bennett, G. J., Denver.
Barstow, J. M., Council Bluffs.
Conroy, H. H., Keswick.
Hull, F. C., Carlisle.
Luckey, G. M., Shellsburg.
Mantz, R. L., Cedar Rapids.
Morse, C. H., Eagle Grove.
Sawyer, P. E., Sioux City.
Smith, C. F., Des Moines.
Shelton, Bernard, Pulaski.
Talboy, J. H., Mapleton.

KANSAS.

Bice, G. R., Plainville.
Bodenhamer, Elmer A., Frederick.
Bertholf, C. M., Cherokee.
Duncan, E. C., Fredonia.
Graham, J. W., Wetmore.
Morrison, Hector, Womer.
Watkins, F. M., Wetmore.

KENTUCKY.

Froedge, C. W., Eighty-Eight.
Filiatreau, R. N., Knottsville.
Keen, L. O., Burkesville.
Lewis, A. S., Greensburg.
Lambert, Stinson, Owensboro.
McPherson, U. W., Sulphur Well.
Norment, Henry T., Anthoston.
Offutt, Vance, Jackson.
Royster, L. C., Smith Mills.
Rowe, A. M., Glasgow.
Stewart, P. H., Paducah.
Stone, W. S., Benton.
Thompson, W. R., Mt. Sterling.
Taylor, Z. G., Knob Lick.
Taylor, Eugene F., Liletown.
Williams, D. J., Ford.
Wilkerson, L. B., Russellville.
York, S. R., Center.

LOUISIANA.

Bernard, F. R., Lake Providence.
Brickell, W. E., New Orleans.
Delcourt, Adolphe, Sr., Terrebonne.

MAINE.

Pillsbury, C. W., Saco.

MARYLAND.

Hirsh, J. L., Baltimore.
Iglehart, N. E. B., Baltimore.
Litsinger, Glenn M., Baltimore.
McNeilan, Milton, Parkersburg.

MASSACHUSETTS.

Adams, James P., Lowell.
Belding, J. E., Springfield.
Eddy, George S., Fall River.
Gafney, H. D., Ware.
Joslin, E. P., Boston.
Sproull, J., Haverhill.
Sheehan, M. D., Stoneham.
White, F. W., Boston.

MICHIGAN.

Blanchard, F. N., Detroit.
Hilliker, J. B., Grand Rapids.
Noble, F. W., Remus.
Older, H. L., Morenci.
Zumstein, F. E., Detroit.

MINNESOTA.

Burton, O. A., Albert Lea.
Byrnes, W. J., Minneapolis.
Benham, E. W., Amboy.
Boyd, H. J., Alexandria.
Cavanaugh, J. O., St. Paul.
Cook, P. B., St. Paul.
Coon, G. M., St. Paul.
Duncan, W T., Fergus Falls.
Payette, C. H., W. Duluth.
Plummer, Henry S., Rochester.
Pool, Daniel, St. Paul.
Schjelderup, W. H., Granite Falls
Whiting, A. D., St. Cloud.
Woodruff, C. W., Chatfield.
Whyte, J. J., Bertha.

MISSISSIPPI.

Burnham, Chas. E., Big Springs.
Greaves, Walter J., Biloxi.
Linder, F. B., Oxford.
McEachern, C. G., Moss Point.

MISSOURI.

Ayars, T. R., St. Louis.
Atkins, Calvin, Independence.
Allison, Nathaniel, St. Louis.
Craig, T. B. M., Nevada.
Colley, E. A., Plattsburg.
Caldwell, W. C., Essex.
Cadwell, Victor, Essex.
Donnell, J. F., Festus.
Forster, Otto E., St. Louis.
Fowler, S. R., St. Louis.
Forgrave, H. S., St. Joseph.
Gilmer, J. E., Piedmont.
Grant, J. M., St. Louis.
Hall, H. R., St. Louis.
Heryford, W. B., Pickering.
Hamilton, R. L., Richmond.
Hickman, S. P., Ulman.
Kinner, Wm., Ferguson.
Lanier, L. H., Martinsburg.
Mueller, E. H., St. Louis.
Moore, G. M., Linn Creek.
Moore, J. G., St. Louis.
McNutt, I. N., Pevely.
McCulloch, G. A., Kearney.
Newhouse, Stanley, Kansas City.
Rice, J. J., Kearney.
Snodgrass, C. A., St. Louis.
Schmalhorst, D. E., St. Louis.
Shankland, W. M., Clinton.
Steedman, I. G., St. Louis.
Schwab, S. I., St. Louis.
Tureman, H. C., Kansas City.
Taylor, W. F. S., Poplar Bluff.
Talbot, Ambrose, Kansas City.
Wheeler, B. N., Kansas City.
Wilson, Eli, Leora.

MONTANA.

Bond, Harry A., Dillon.
Duncan, A. R., Kalispell.
Freund, I. D., Butte.
McGrath, George, Hamilton.
Packard, L. R., Whitehall.
Peek, W. A., Amador.
Warren, O. Y., Warm Springs.

NEBRASKA.

Andrews, James A., Holdrege.
Barton, A. E., Arcadia.
Bild, Elmer J., Page.
Butterbaugh, W. S., Johnson.
Hilton, D. C., Lincoln.
Hartwell, J. E., Crawford.
Thompson, T. D., West Point.

NEVADA.

Cox, J. E., Tonopah.
Dempsey, G. L., Fallon.
Drake, F. N., Goldfield.
Hood, W. H., Reno.
Samuels, W. L., Winnemucca.

NEW HAMPSHIRE.

Douglas, O. B., Concord.

NEW JERSEY.

Buchanan, J. Hervey, Plainfield.
De Hart, Clara M., Jersey City.
Dodge, Walter, Orange.
Harmon, W. J., Trenton.

NEW MEXICO.

Goelitz, Herman W., Las Vegas.
Long, John W., Tularosa.

NEW YORK.

Ippolito, Gennoro, New York City.
Kellogg, E. K. L., New York City.
Lambert, E. B., Port Jervis.
Pfeiffer, F., New York City.
Roberts, P. W., New York City.
Sinnott, J. J., Mt. Vernon.
Shrady, John Eliot, New York City.

NORTH CAROLINA.

Taylor, Isaac M., Morganton.

NORTH DAKOTA.

Irwin, S. H., Grand Forks.
Kaufmann, Carl, Wahpeton.
Mallarian, K. H., Fargo.
Sasse, E. G., Lidgerwood.
Shrodes, Geo. H., Lidgerwood.
Strauss, F. B., Glen Ullin.
Tronnes, N. L., Fargo.

OHIO.

Anders, C. I., Old Fort.
Brown, N. Worth, Toledo.
Chabot, G. W., Otway.
Dreyer, C. C., Toledo.
De la Barre, Paul, Port Clinton.
Edwards, H. E., Cleveland.
Fullerton. E. B., Columbus.
Houser, D. C., Millerstown.
Harrison, Charles M., Napoleon.
Hobson, J. A., Flushing.
Haldy, Walter A., Cleveland.
Halleck, F. D., Bowling Green.
King, C. W., Dayton.
Kleyinger, L. G., Dayton.
Kimmell, J. A., Findlay.
Marder, A. W., Lebanon.
Minton, Fred P., E. Toledo.
Moore, T. M., Willoughby.
Ong, A. R., Martins Ferry.
Pitkin, C. E., Cleveland.
Spence, W. S., Germano.
Snyder, A. E., Bryan.
Snyder, G. C., Moxahala.
Stephen, J. E., Drusilla.
Salzer, Moses, Cincinnati.
Thompson, J. A., Cincinnati.
Woolgar, W. J. W., Cleveland.
Young, H. A., Cleveland.

OREGON.

Ainslee, George, Portland.
Barber, J. R., Portland.
Coghlan, J. N., Portland.
Cauthorn, F., Portland.
Equi, Marie D., Portland.
Ferguson, E. E., The Dalles.
Ferguson, Belle C., The Dalles.
Flanagan, W. H., Grant's Pass.
Griffith, L. F., Salem.
Kelly, Richmond, Portland.
Manion, K. C., Portland.
McGavin, J. M., Portland.
Nunn, R., Portland.
Newth, C. H., Philomath.
Parker, M. E., Portland.
Paine, D. A., Eugene.
Panton, J. J., Portland.
Reuter, J. A., The Dalles.
Strickland, M. C., Oregon City.
Sheldon, S. H., Portland.
Taylor, Frank M., Portland.
Wallace, J. P., Albany.
Wheeler, C. H., Portland.
Walls, J. J., Portland.
Ziegler, Amelia, Portland.

PENNSYLVANIA.

Adams, C. W., Uniontown.
Allen, F. O., Jr., Philadelphia.
Bryant, Wm. C., Pittsburg.
Byrne, T. J., Philadelphia.
Barth, J. B., Charleroi.
Campbell, W. J., Mt. Union.
Dehoney, Howard, Philadelphia.
Enfield, Walter F., Bedford.
Fish, H. S., Sayre.
Gwyn, N. B., Philadelphia.
Henry, J. A., Lancaster.
Hough, C. B., Ambler.
Koons, J. H., Waynesboro.
McKee, Claude W., Scottdale.
Manning, C. J., Harrisburg.
Shurtleff, H. C., Philadelphia.
Smith, H. F., Harrisburg.
Scarlett, R. B., Philadelphia.
Updegrove, J. D., Easton.
Wechsler, B. B., Pittsburg.
Woods, G. H., Pine Grove Mills.

PHILIPPINE ISLANDS.

Newberne, R. E., Manila.
Thomas, R. C., Capiz.

RHODE ISLAND.

Ballou, Chas. O., Providence.
Hamlin, E. F., Statesville.
Watson, W. P., Pawtucket.

SOUTH CAROLINA.

Pack, W. S., Greenville.

SOUTH DAKOTA.

Berry, S. G., Tyndall.
Daniels, A. H., Mitchell.
Kammerling, T. S., Mitchell.
Kheiralla, G. I., Lake Preston.
Lawver, J. C., Spencer.
Morehouse, E. M., Yankton.
Miller, E. C., Brookings.
Sornsen, A. A., Summit.

TENNESSEE.

Dotson, Walter, Kempville.
Dake, R. W., Nashville.
Edwards, C. W., Memphis.

TEXAS.

Bowman, A. R., Uvalde.
Cathcart, J. W., El Paso.
Hildebrand, W. J., Gonzales.
Johnston, E. A., Amarillo.
Parr, A. B., Dimmitt.
Roebuck, L. B., Sweetwater.
Van Vettermann, Emanuel, Shiner.

UTAH.

Robison, Geo. E., Provo City.

VIRGINIA.

Chinn, Geo. E., Norfolk.
Henkel, Casper C., Shenandoah.
Hobson, S. W., Newport News.
Meriwether, G. D., Buena Vista.
Mitchell, L. G., Downings.
Robertson, E. W., Onancock.
Thornhill, W. B., Lynchburg.

WASHINGTON.

Gammon, C. P., Walla Walla.
Harrison, R. H., Tacoma.
Hawley, Alanson W., Seattle.
Van Vechten, W. B., Tacoma.
Wells, W. B., Hoquiam.

WEST VIRGINIA.

Barbee, H. A., Point Pleasant.
Bosworth, J. W., Philippi.
Doyle, J. H., Grafton.
Moore, J. W., Charleston.
Morgan, E. H., Eagle.
Proudfoot, M. H., Rowlesburg.

WISCONSIN.

Bacon, H. L., New London.
Bodorn, Thomas, Blair.
Bassard, Clemens, Richfield.
Cunningham, J. N., Stanley.
Cutter, J. D., Tomahawk.
Ellenson, E. P., Chippewa Falls.
Franzel, J. E., Howards Grove.
Glasier, M. B., Bloomington.
Grant, J. C., Lena.
Graenicher, Sigmund, Milwaukee.
Harter, A. F. S., La Crosse.
Horace G. Hilliard, Baraboo.
Ladwig, W. A., Edgar.
Luhman, F. W., Morrison.
McCormick, Hugh, New Auburn.
McKellar, A., Blanchardville.
Noble, J. B., Waukesha.
Nystrum, C. E., Medford.
Reinhardt, J. Paul, Fountain City.
Schoenfeld, Chas. J., La Crosse.
Shaw, B. W., Waunakee.
Storey, C. L., Hayward.
Ven Hengel, G. T. A., Waupun.
Winneman, F. A., Hazelhurst.

WYOMING.

Freeman, Chas. M., Rock Springs.
Godfrey, A. C., Lander.
Wicks, Jos. L., Evanston.

Marriages

Leo Bloch, M.D., to Miss Elise Nichols, both of Louisville, Ky., June 6.

Louis E. Schmidt, M.D., to Miss Marie Mansfield, both of Chicago, June 1.

Edward M. Holmes, M.D., to Miss Sadie Clohesy, both of Chicago, June 7.

Edward P. Andrews, M.D., to Miss Isabel Bain, both of Milwaukee, June 1.

Roy A. Dodge, M.D., Omaha, to Miss Ella Ruffner of Plattsmouth, Neb., June 3.

Robert S. Engler, M.D., to Mrs. E. Harriett Thornton, both of Philadelphia, May 9.

Lewis W. Spradling, M.D., to Miss Lida Burns, both of Athens, Tenn., May 22.

John Cook Hirst, M.D., Philadelphia, to Miss Maud Wilson Boyd of Maryland, June 1.

E. Gecona Maxwell, M.D., to Miss Lila Parker, both of Wildersville, Tenn., May 21.

Ora J. Culbertson, M.D., to Miss Louise Leber, both of East St. Louis, Ill., May 25.

Mervyn Ross F. Taylor, M.D., to Miss Jeannette Riley, both of Philadelphia, June 7.

George Edwin Baxter, M.D., to Miss Cecile Maude Hitchcock, both of Chicago, June 7.

O. P. Hopping, M.D., to Miss Bertha Zella of Mount Pulaski, Ill., at Girard, Kan., May 24.

Reinhard E. Wobus, M.D., St. Louis, to Miss Dora L. Schaffer of Quincy, Ill., May 23.

Milton Goldsmith, M.D., to Luba Natalia Robin, M.D., both of Pittsburg, Pa., March 25.

Clinton G. Beckett, M.D., Hillsboro, Ind., to Miss Lillie Rhode of Winthrop, Ind., May 21.

William De Forrest Olmstead, M.D., to Miss Martha E. Smith, both of Baltimore, May 29.

Mills T. Chastain, M.D., Marshall, Mo., to Miss Dora Cartright of Milton, Ore., May 24.

Victor D. Miller, Jr., M.D., to Miss Nellie Baechtel Loose, both of Hagerstown, Md., June 1.

A. D. Brewer, M.D., Belgrade, Mont., to Miss Florence Belle Somers of Grinnell, Iowa, May 22.

Richard Weil, M.D., to Miss Minnie Straus, both of New York City, at Long Branch, May 30.

James Maxwell Dell, M.D., Gainesville, Fla., to Miss Johnnie Liddon of Ocala, Fla., June 7.

Charles M. Hendricks, M.D., Denver, Colo., to Miss Edith Louise Duguid of Toledo, Ohio, June 7.

James E. Hicks, M.D., Mount Vernon, Ind., to Miss Lilian Harriet Ridley of Toledo, Ohio, May 25.

Michael A. Floersch, M.D., Hartington, Neb., to Miss Rose Uhlrich of Wamego, Kan., May 24.

Michael H. Etcheverry, M.D., San Diego, Cal., to Miss Caleste Lacoste of San Francisco, June 1.

Bruce Linville Taylor, M.D., Washington, D. C., to Miss Helen Sewell Child, at Baltimore, June 1.

Arthur F. Hess, M.D., Zanesville, Ohio, to Miss Grace G. Wallwork of the Adamsville road, June 8.

Frederick C. Warnshuis, M.D., to Miss Calla Ewing Bottsford, both of Grand Rapids, Mich., May 24.

Llewellyn Powell Spears, M.D., to Miss Katherine Linwood Payne, both of Louisville, Ky., May 25.

Henry Stephen Smith, M.D., San Diego, Cal., to Miss May F. Lawton of Los Angeles, Cal., May 17.

William Wesley Stallworth, M.D., Fayette, Ala., to Miss Mary Ruth Plant of Birmingham, Ala., May 23.

James A. Rea, M.D., Wellington, Kan., to Miss Kate Parshall of Lamont, Iowa, at Newkirk, Okla., May 27.

William Alva Davis, M.D., Baltimore, to Mrs. Maria Kane Wetherill Apperson of Philadelphia, at Baltimore, May 25.

George Bullock Weiss, M.D., Washington, D. C., to Miss Virginia Tilard Syme of Winchester, Va., at Baltimore, May 25.

Clark Stevens Fortney, M.D., Howesville, W. Va., to Mary Jeanette Fansler, M.D., of Rowlesburg, W. Va., in Washington, D. C., May 25.

Deaths

Henry Putnam Stearns, M.D. Medical Institution of Yale College, New Haven, 1855, a member of the American Medical Association; sometime president and vice-president of the Connecticut Medical Society and the Hartford Medical Society; ex-president of the American Medico-Psychological Association, and of the Yale Medical Alumni Association; for 31 years superintendent of the Retreat for the Insane, Hartford; lecturer on insanity in Yale University Medical Department from 1876 to 1897; during the Civil War first surgeon of the First Connecticut Volunteer Infantry, and later brigade surgeon of volunteers and medical director; an eminent practitioner, teacher, alienist and expert on insanity, died at his home in Hartford, May 27, from general nervous breakdown, aged 77. The Hartford Medical Society, at a special meeting, passed resolutions of regret and voted to attend the funeral in a body.

James Thorburn, M.D. Toronto University Medical Faculty, 1856, for several years professor of pharmacology and therapeutics in his alma mater; president of the Canadian Medical Council in 1895, and of the Ontario Medical Council two years later; surgeon to the Queen's Own Rifles, a member of the staff of the Toronto General Hospital, died at his home in Toronto, May 26, from heart disease, after a short illness, aged 74.

John William Compton, M.D. Medical College of Evansville, Ind., 1873, assistant surgeon of the Seventeenth Kentucky Volunteer Infantry during the Civil War; at one time professor of materia medica and therapeutics in his alma mater, and from 1881 to 1885 president of the State Board of Health, died at the home of his son in Terre Haute, Ind., May 28, after a long illness, aged 80.

George Miles Palmer, M.D. University of Buffalo (N. Y.) Medical Department, 1865, supervisor of the town of Pike for five terms; representative from Wyoming County in the legislature for two terms; health officer of Warsaw; surgeon in the Army during the Civil War, died at his home in Warsaw, N. Y., May 28, after a lingering illness, aged 77.

Edward Payson Drown, M.D. Harvard University Medical School, 1893; city physician of Malden, Mass., 1895 to 1898, past president of the Malden Medical Society; member and district censor of the Massachusetts Medical Society, died at his home in Malden, May 25, from peritonitis, a few hours after an operation for appendicitis, aged 39.

Melville M. Shearer, M.D. Medical Department of the University of Iowa, Keokuk, 1864; surgeon of the Forty-eighth Illinois Volunteer Infantry during the Civil War; sometime physician of Sonoma County, Cal., and president of the Sonoma County Medical Society, died at his home in Santa Rosa, May 28, after an illness of two months.

John Findley Hathaway, M.D., a practitioner of Leavenworth, Kan., for more than 50 years, an early "free-state" and anti-slavery advocate, died at the Western Branch of the National Home for Disabled Volunteer Soldiers, Leavenworth, from cerebral hemorrhage, Oct. 27, 1904, aged 85.

Miles F. McTaggart, M.D. Philadelphia, 1865; College of Physicians and Surgeons of Ontario, Toronto, 1880, a member of the Medical Society of the State of California, died at his home in Reno, Nev., May 22, from heart disease, after an illness of six months, aged 55.

John Ford McCarthy, M.D. Rush Medical College, Chicago, 1855, surgeon of the Fifteenth and the Twenty-ninth Indiana Volunteer Infantry during the Civil War; postmaster of Valparaiso, Ind., for 12 years, died at his home in that city, May 27, from cancer, aged 77.

John Williams Streeter, M.D. Illinois, 1868, of Chicago, formerly major-surgeon First Infantry, Illinois National Guard, and assistant-surgeon general of the state, died at his summer home in Lake Forest, Ill., from spinal paralysis after an illness of several years, aged 63.

William Bernard Warren, M.D. Dartmouth Medical School, Hanover, N. H.; New York University, New York City, 1881, a member of the Massachusetts Medical Society, died suddenly at his home in Groton, Mass., April 29, from cerebral hemorrhage, aged 51.

Cranston de St. Remy, M.D. Faculty of Medicine of Queen's University, Kingston, Ont., 1903, of Kingston, house surgeon of the Manhattan Eye and Ear Hospital, died in St. Vincent's Hospital, New York City, April 7, after an illness of several weeks.

Hatton Nathan Thompson Harris, M.D. College of Physicians and Surgeons in the City of New York, 1885, surgeon United States Navy, died at the Naval Hospital, Pensacola, Fla., May 19, from appendicitis, after an illness of five days, aged 43.

D. H. Johnson, M.D. New York University, New York City, 1868, a member of the San Mateo County (Cal.) Medical Society, died from interstitial myocarditis at his home in San Mateo, March 12, after an illness of six months, aged 70.

Roger S. Turlington, M.D. Medical College of Virginia, Richmond, 1895, formerly of Bennettsville, S. C., died in the James Walter Memorial Hospital, Wilmington, N. C., from acute alcoholism, May 17, after an illness of four days, aged 40.

Henry B. Orr, M.D. Tulane University of Louisiana Medical Department, New Orleans, 1898, of New Orleans, for several years professor of biology in Tulane University, died at Touro Infirmary, New Orleans, May 29, after a long illness.

Albert H. Dickinson, M.D. University of Maryland School of Medicine, Baltimore, 1856, formerly of Galena, Md., was found dead in his room in Baltimore, May 23, from the effects of laudanum taken with suicidal intent, aged 74.

Emil Tietze, M.D. Royal Academy of Medicine and Surgery, Dresden, Saxony, 1847, for many years chief surgeon for the Pennsylvania Railroad at Altoona, died at the home of his daughter in Philadelphia, May 24, aged 76.

August F. Hipp, M.D. Cincinnati College of Medicine and Surgery, 1870, for 11 years physician at the Toledo (Ohio) Workhouse, died at his home in Toledo, May 25, after an illness of seven months, aged 66.

Joseph A. Gilliss, M.D. Washington University School of Medicine, Baltimore, 1870, of Baltimore; for 10 years vaccine and police physician, died suddenly from cerebral hemorrhage, in York, Pa., June 2, aged 64.

Arthur R. Boyle, M.D. Faculty of Medicine of Queen's University and Royal College of Physicians and Surgeons, Kingston, Ont., of Wychwood Park, Ont., died in Grace Hospital, Toronto, May 27, aged 70.

Ross Fear Klock, M.D. Medico-Chirurgical College, Kansas City, Mo., 1904, of Ottumwa, Kan., was drowned, March 18, while making a professional call which necessitated fording the Neosho River, aged 28.

Joseph S. De Jarnette, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1848, formerly treasurer of Spottsylvania County, Va., died at his home in Lewiston, Va., May 23, aged 75.

Thomas F. Steele, M.D. New York University, New York City, 1888, of Unionport, Borough of the Bronx, New York City, died May 27 at the Lebanon Hospital, New York City, from pneumonia, aged 35.

Amasa J. Mullan, M.D. Central College of Physicians and Surgeons, Indianapolis, 1893, died from general miliary tuberculosis at his home in Indianapolis, May 30, after an illness of four weeks, aged 34.

Clio B. Collier, M.D. Tennessee Medical College, Knoxville, 1900, assistant physician of Knox County, Tenn., died at his home in Knoxville, May 27, from tuberculosis, after a long illness, aged 28.

Ira P. Smith, M.D. Albany (N. Y.) Medical College, 1859, surgeon of a New York regiment during the Civil War, died suddenly from heart disease at his home in Bath, N. Y., aged 69.

Emmett Jowers, M.D. Tulane University of Louisiana Medical Department, New Orleans, 1890, of New Orleans, died May 22 at Channing, Texas, after a long illness, from tuberculosis, aged 46.

George Frederick Thomas, M.D., at one time professor of pathology in Cooper Medical College, San Francisco, died at his home in Berkeley, Cal., April 10, from senile debility, aged 83.

John L. C. Whitcomb, M.D. New York University, New York City, 1890, a member of the New York State Medical Association, died at his home in Liberty, N. Y., May 21, aged 43.

Robert M. Delzell, M.D. License Indiana, 1897, of Reynolds, Ind., was instantly killed May 29, by a tree struck by lightning falling on the carriage in which he was, and crushing him.

Everett L. Creesy, M.D. Harvard University Medical School, Boston, 1900, died at his home in Beverly, Mass., May 28, from the effects of morphin taken with suicidal intent, aged 30.

Lebbeus J. Bigelow, M.D. Baltimore Medical College, 1891, of Juniata, Pa., died at the Altoona Hospital from paretic dementia, May 23, after a long illness, aged 35.

C. W. Eagon, M.D., a veteran of the Civil War, in which he served as surgeon in a Virginia regiment, died at his home in Parkersburg, W. Va., May 22, aged 75.

William Hale Burns, M.D., for many years a practitioner of Richview, Ill., died at the home of his son in San Jose, Cal., from senile debility, May 18, aged 84.

Hal-Cee J. Hamilton, M.D. Hospital College of Medicine, 1897, died at his home in Clear Creek, Ind., from tuberculosis, May 26, after a long illness, aged 37.

Henry Wagner Kreider, M.D. Rush Medical College, Chicago, 1856, died at his home in Galesburg, Ill., May 25, after a short illness, from senile debility, aged 86.

J. R. Franklin, M.D. Medical College of Alabama, Mobile, 1880, a member of the Louisiana State Medical Society, died at his home in Hornbeck, March 31.

Sylvester M. Hewitt, MD. Vermont Medical College, Woodstock, 1843, formerly treasurer of Morrow County, Ohio, died recently at his home in Cincinnati.

Albert E. Harvey, M.D. Faculty of Medicine of Queen's University, Kingston, Ont., 1869, died suddenly at his home in Wyoming, Ont., May 27, aged 63.

John A. Greig, M.D. Manitoba Medical College, Winnipeg, 1887, formerly of Bottineau, N. D., died in Washington recently, from tuberculosis.

Charles A. Wean, M.D. Detroit Medical College, 1885, died at his home in Chicago, May 28, from septicemia, after an illness of 10 days, aged 40.

Charles C. Higgins, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1863, died in Chicago, May 26, from acute nephritis, aged 65.

Joseph E. Lowes, M.D. Ohio, 1868, of Dayton, Ohio, died from cerebral hemorrhage at Pasadena, Cal., May 24, after a short illness, aged 56.

Clyde E. Huffman, M.D. Cincinnati College of Medicine and Surgery, 1892, died suddenly in his office in Cincinnati, May 27, aged 38.

Matthew Q. Hendrix, M.D. Rush Medical College, Chicago, 1884, died at his home in Lexington, S. C., from smallpox, May 20.

Henry P. Watson, M.D. Dartmouth Medical School, Hanover, N. H., 1867, died at his home in Manchester, May 19, aged 61.

Philip Chisholm, M.D., the oldest resident of Cape Breton, died at Loch Lomond, C. B., March 10, aged 102.

Deaths Abroad.

M. Soupault, M.D., author of what promises to be a classic work on diseases of the stomach, his specialty, died at Paris May 2, in the prime of life, succumbing to diabetes.

K. Eckhard, M.D., professor of physiology at Giessen and author of a manual of anatomy, and of works on experimental physiology on the nervous system and on the glands and their functions, died at Giessen May 3, aged 83.

Paquelin, the inventor of the thermocautery which has made his name a familiar term in medical circles the world around, died at Paris about May 1, at an advanced age. He invented his cautery soon after he had commenced to practice medicine in Paris, about 1870. It was adopted almost at once by the profession. Paquelin was little known by the present generation. He always refused to accept the teachings of bacteriology and held himself aloof from those professing the microbian doctrine.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

ARE TRICHINÆ IN DRIED BEEF?

FALLS CHURCH, VA., May 26, 1905.

To the Editor:—Can dried or "jerked" beef infect the human alimentary canal with the tapeworm larvæ as does raw beef?

INQUIRER.

ANSWER.—We do not believe that dried or jerked beef will infect with trichinæ in the same way as raw beef. Of course something depends on the length of time that the beef is dried. We think it would be impossible for trichinæ to live long in beef that is properly dried.

CONVENTIONS TO BE HELD IN EUROPE.

PHILADELPHIA, May 25, 1905.

To the Editor:—Will you kindly publish a list of the medical societies and congresses that are to meet in Europe during the summer and fall of 1905. MIHRAN K. KASSABIAN.

ANSWER.—The following is a list of meetings of which we have information:

June 9 and 10: Fourteenth Congress of German Otologic Society. Homburg.

June 12: Congress of Laryngologists of Southern Germany. Heidelberg.

June 13: First Congress of German Laryngologic Association. Heidelberg.

June 13: Second French Congress for School Hygiene. Paris.

June 13 and 14: Congress of Bavarian Psychiatrists. Munich.

June 14 to 17: German Congress of Gynecology. Kiel.

July 25 to 28: Annual Meeting of British Medical Association. Leicester.

August 1 to 7: Fifteenth French Congress of Alienists and Neurologists. Rennes.

August 7 to 10: International Congress of Anatomy. Geneva.

August 13 to 15. Belgian Congress of Professional Medicine. Liège. Secretary, Dr. Hougardy, Rue du Diamant, Liège.

August 13 to 15: First International Congress of Physico-Therapy. Liège. Secretary, Dr. De Munter, 86 rue Louvrex, Liège.

September 11 to 16: Tenth International Antialcohol Congress. Budapest.

September 11 to 18: Fifth International Congress for Gynecology. St. Petersburg.

September 21 to 23: First International Congress of Surgery. Brussels.

September 20-23: Fifth German Medical Study Trip. Starts from Munich and ends at Meran. Dr. W. H. Gilbert of Baden in charge.

September 24 to 30: Seventy-seventh German Congress of Physicians and Scientists ("Naturforscher Congress"). Meran. General secretary, Dr. S. Huber, Meran.

September: First International Congress of Education and Protection of the Child in the Family. Liège. Secretary's address, 44 via Rubens, Brussels.

October 2 to 4: Seventh French Congress for Internal Medicine. Liège.

October 2 to 7: International Tuberculosis Congress. Paris.

The French Congress for Suppression of Illegal Practice of Medicine has been postponed to April 30, 1906.

The "Leipziger Verband" for the Promotion of the Material Interests of the Physicians of Germany holds its annual meeting at Strasburg in June.

BIOGRAPHY—DODERLEIN—FACULTATIVE ANAEROBE.

NASHVILLE, TENN., May 26, 1905.

To the Editor:—1. Is there a work published that gives a short biography of the most prominent *living* men of science (especially in medicine) in America or Europe or both? 2. With what institution, if any, is Döderlein connected and what is his address? 3. What is the meaning of the term "facultative anaërobe? Stengel's work on pathology and many of the standard works on surgery give exactly opposite definitions to those given by many standard textbooks on bacteriology. X.

ANSWER.—1. The "Bibliographical Dictionary of Physicians," published by D. G. Brinton, 115 South Seventh Street, Philadelphia, 1880, contains short biographies of contemporary American physicians and surgeons "Physicians and Surgeons of America," Republican Press Association, Concord, N. H., 1896, is a collection of biographical sketches of the regular medical profession. The two above mentioned are probably out of print, but will, perhaps, be found in some library. "Who's Who in America," A. N. Marquis & Co., Chicago, also contains the names and short biographical sketches of leading medical men. "Biographisches Lexikon hervorragender Arzte," by Professor Pagel of Berlin, gives similar information concerning European physicians (most of them deceased). It is in German (price, about $8.50), and may be purchased from W. T. Keener & Co., 90 Wabash Avenue, Chicago. Appleton's Universal and other good encyclopedias give sketches of the most prominent men in the profession. 2. Döderlein is professor of gynecology at the University of Tübingen, Germany. 3. A facultative anaërobe is a micro-organism which will grow either in the presence or in the absence of oxygen.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending June 3, 1905:

Richards, R. L., asst.-surgeon, now at San Francisco, relieved from further duty in the Philippines Division and ordered to Vancouver Barracks, Washington, for duty.

Cole, Clarence L., asst.-surgeon, recently appointed; ordered to the bacteriologic laboratory at Army Medical Museum, Washington, D. C., for temporary duty.

Richards, Robert L., asst.-surgeon, reported for temporary duty at Fort Mason, Cal.

Jones, Percy L., asst.-surgeon, ordered to report, June 12, 1905, to Major Wm. H. Arthur, surgeon, president examining board, Washington, D. C., for examination to determine his fitness for advancement to rank of captain.

Perley, H. O., deputy surgeon general, Mason, Charles F., surgeon, McCulloch, C. C., Jr., surgeon, appointed members of a board to meet at West Point, N. Y., about June 5, 1905, for the examination of such officers of the medical department as may be ordered before it to determine their fitness for promotion.

Rhoads, Thos. L., asst.-surgeon, under orders to report to president of examining board at West Point, N. Y., for examination to determine his fitness for advancement.

Rand, I. W., asst.-surgeon, ordered to accompany detachment of 10th Infantry from Presidio of San Francisco, to Portland, Ore.

Stone, John H., asst.-surgeon, relieved from duty at Fort Leavenworth, Kans., and ordered to Key West Barracks, Fla., for duty.

Hartnett, Eugene H., asst.-surgeon, relieved from duty at Key West Barracks, Fla., and ordered to Fort Hancock, N. J., for duty.

McCulloch, C. C., Jr., surgeon, relieved from duty at Fort Hancock, N. J., and ordered to the Presidio of Monterey, Cal., for duty.

Koerper, C. E., asst.-surgeon, having relinquished leave of absence, is ordered to the U. S. Army General Hospital, Washington Barracks, D. C., for duty.

Stiles, Henry R., asst.-surgeon, ordered to report to Major Wm. H. Arthur, surgeon, president of examining board, Army Medical Museum Building, Washington, D. C., June 15, 1905, for physical examination to determine his fitness for promotion.

Reno, Wm. W., asst.-surgeon, ordered to proceed from Fort Myer, Va., to Washington Barracks, D. C., for temporary duty.

Murtagh, John, A., asst.-surgeon, granted ten days' leave of absence.

Banister, John M., surgeon, left Fort Riley, Kans., on leave of absence.

Glennan, James D., surgeon, left Fort Myer, Va., on ten days' leave of absence.

Long, Charles J., dental surgeon, left Fort Harrison, Mont., for temporary duty at Fort Missoula, Mont.

Watkins, Victor E., contract surgeon, accompanied Troop M, 5th Cavalry from Fort Apache, Ariz., to Fort Du Chesne, Utah, and ordered to remain on duty with that troop.

Thorp, Charles W., contract surgeon, returned to Fort Ethan Allen, Vt., from temporary duty at Fort Adams, R. I.

Mason, George L., dental surgeon, ordered from Fort Oglethorp, Ga., to Fort Dade, Fla., for temporary duty.

Woiven, F. Homer, dental surgeon, left Fort Adams, R. I., for Fort Williams, Me., for temporary duty.

Ware, William H., dental surgeon, left Fort Grant, Ariz., and arrived at his proper station, Fort Logan, Colo.

Navy Changes.

Changes in the Medical Corps, U. S. Navy, week ending June 3

G. M. Olson, B. Elmore and E. O. J. Eytinge, asst.-surgeons, appointed asst.-surgeons, with the rank of lieutenant (J. O.), from May 24, 1905.

Mears, J. B., acting asst.-surgeon, ordered to additional duty at the Marine Recruiting Station, Buffalo, N. Y.

Guthrie, J. A., surgeon, detached from the *Dixie* and ordered to the Naval Hospital, New York, N. Y., for treatment.

Murphy, J. F., asst.-surgeon, ordered to additional duty on the *Dubuque*.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending May 31, 1905:

Vaughan, G. T., assistant surgeon general, granted leave of absence for one month and fifteen days from June 16.

Carmichael, D. A., surgeon, bureau letter of May 24, 1905, granting him leave of absence for 14 days from May 12, 1905, amended so that said leave shall be for eleven days only.

Corput, G. M., P. A. surgeon, granted leave of absence for seven days from May 28, 1905, under paragraph 191 of the regulations. Granted extension of leave of absence for 23 days from June 4.

Holt, J. M., P. A. surgeon, granted extension of leave of absence, on account of sickness, for 1 month, from May 29.

Wilson, R. L., P. A. surgeon, granted leave of absence for ten days, from May 31, 1905.

Baley, C. W., acting asst.-surgeon, granted leave of absence for twenty-six days, from June 5 to May 27, 1905.

Edwards, J. W., acting asst.-surgeon, granted leave of absence for three days, from May 20, 1905, under paragraph 210 of regulations.

Schug, F. J., acting asst.-surgeon, granted leave of absence for fifteen days, from June 15 to May 26, 1905.

Stuart, A. F., acting asst.-surgeon, granted leave of absence for thirty days, from July 3 to May 27, 1905.

Gahn, Henry, pharmacist, relieved from duty at Purveying Depot, New York, and directed to proceed to Washington, D. C., for duty in the Purveying Depot in that city, May 27, 1905.

Stearns, W. L., pharmacist, relieved from duty at Purveying Depot, New York, and directed to proceed to Santa Rosa quarantine, Pensacola, Fla., and report to acting asst.-surgeon in charge for duty and assignment to quarters, relieving Pharmacist Chas. Miller, May 26, 1905.

Miller, Charles, pharmacist, on being relieved from duty at the Santa Rosa Quarantine Station, Pensacola, Fla., by Pharmacist W. L. Stearns, to proceed to San Francisco, Cal., and report to the medical officer in command for duty and assignment to quarters, May 26, 1905.

Bierman, C. H., pharmacist, granted leave of absence for thirteen days, from June 7 to May 25, 1905.

Dr. Montafix W. Houghton, appointed acting assistant surgeon for duty at Providence, R. I., May 29, 1905.

Acting Asst.-Surgeon J. W. Hargis, resigned, to take effect May 31, 1905.

Health Reports.

The following cases of smallpox, yellow fever and plague have been reported to the Surgeon General, Public Health and Marine-Hospital Service during the week ended June 3, 1905:

SMALLPOX—UNITED STATES.

Arkansas: Fort Smith, March 11-April 22, 8 cases.
Florida: Jacksonville, May 20-27, 1 case.
Illinois: Chicago, May 20-27, 28 cases; Galesburg, May 20-27, 2 cases.
Louisiana: New Orleans, May 20-27, 11 cases, two imported.
Massachusetts: Lowell, May 20-27, 5 cases; Quincy, May 13-20, 1 case.
Michigan: Detroit, May 21-28, 2 cases; Grand Rapids, May 13-27, 41 cases, 8 deaths.
Missouri: St. Joseph, May 20-27, 12 cases; St. Louis, May 20-27, 3 cases.
Montana: Butte, May 14-21, 1 case.
Nebraska: Omaha, May 20-27, 3 cases; South Omaha, May 12-19, 3 cases.
New Hampshire: Manchester, May 20-27, 1 case; Nashua, May 20-27, 2 cases.
Pennsylvania: Lebanon, May 20-27, 1 case; York, May 20-27, 16 cases.
Tennessee: Memphis, May 20-27, 5 cases.
West Virginia: Morgan County, Oct. 31, 1904-May 25, 1905, 200 cases.
Wisconsin: La Crosse, May 20-27, 2 cases.

SMALLPOX—INSULAR.

Porto Rico: San Juan, April 1-30, present.

SMALLPOX—FOREIGN.

Africa: Cape Town, April 8-15, 4 cases.
France: May 6-13, Lyon, 1 case; Paris, 20 cases, 2 deaths.
Great Britain: Bradford, May 6-20, 9 cases; London, May 6-13, 2 cases; Newcastle-on-Tyne, May 6-13, 7 cases; Nottingham, April 29-May 6, 1 death; South Shields, April 29-May 6, 2 cases.
India: Bombay, April 25-May 2, 63 deaths; Karachi, April 16-30, 27 cases, 11 deaths.
Italy: Catania, May 11-19, 4 deaths; Cosenza Province, April 30-May 4, 2 cases; Lecce Province, April 20-May 4, 7 cases; Milan Province, April 20-May 4, 2 cases; Messina Province, April 20-May 4, 1 case; Mazzarino, April 20-May 4, 1 case; Palermo, April 29-May 13, 12 cases, 3 deaths; Potenza, April 20-May 4, 2 cases; Siena, April 20-May 4, 2 cases; Syracuse, April 20-May 4, 5 cases; Villenza, April 20-May 4, 2 cases.
Russia: Moscow, April 29-May 6, 5 cases, 2 deaths.
Spain: Barcelona, May 1-10, 6 deaths; Cadiz, April 1-30, 3 death.
Turkey: Constantinople, May 7-14, 2 deaths.
West Indies: Bridgetown, May 9, 1 case, probably imported.

YELLOW FEVER.

British Honduras: Belize, May 25-June 1, 4 cases, 4 deaths.
Honduras: Puerto Cortez, May 25-29, 5 cases, 3 deaths.
Mexico: Tierra Blanca, May 14-20, 1 death.
Panama: Panama, January 1-May 13, 63 cases, 22 deaths.

PLAGUE.

Africa: East London, March 18-25, 3 cases.
Egypt: Tukh District, April 15-22, 1 death; April 22-29, 2 cases.
Great Britain: Leith, May 6-13, 3 cases, 1 death.
India: Bombay, April 25-May 2, 822 deaths; Karachi, April 16-30, 483 cases, 422 deaths; Madras, April 22-28, 1 death.
Japan: Formosa, April 20-30, 238 cases, 210 deaths.

Society Proceedings

COMING MEETINGS.

AMERICAN MEDICAL ASSOCIATION, Portland, Ore., July 11-14, 1905.

Amer. Assn. of Genito-Urinary Surgeons, Montreal, June 13-14.
Massachusetts Medical Society, Boston, June 13-14.
American Pedriatric Society, Lake George, N. Y., June 19-21.
Medical Society of New Jersey, West End, June 20-22.
Indian Territory Medical Association, Tulsa, June 20-22.
Michigan State Medical Society, Petoskey, June 28-30.
American Climatological Association, Detroit, Mich., June 29-30.
American Surgical Association, San Francisco, Cal., July 5-7.
South Dakota State Medical Association, Deadwood, July 5-7.
Amer. Assn. of Life Ins. Exam. Surgeons, Portland, Ore., July 10.
American Medical Editors' Assn., Portland, Ore., July 10.
Oklahoma State Medical Association, Guthrie, July 10-11.
American Urological Association, Portland, Ore., July 12-13.

NATIONAL ASSOCIATION FOR THE STUDY AND PREVENTION OF TUBERCULOSIS.

Annual Meeting, held at Washington, D. C., May 18-19, 1905.

(Concluded from page 1806.)

Report of the Committee on Early Diagnosis.

Drs. A. C. Klebs, Chicago; J. H. Musser, Philadelphia; F. Billings, Chicago; J. C. Wilson, Philadelphia, and H. R. M. Landis, Philadelphia, made the following report, which has been referred to on page 1805:

The diagnosis of phthisis, that well-developed stage of pulmonary tuberculosis, offers no difficulty whatever, the symptoms are well marked and typical, the pulmonary signs easily discoverable, the expectoration contains bacilli—the clinical picture is so typical that mistakes in diagnosis can not well be made, even by the superficially trained observer.

But this stage of pathologic development in the great majority of cases is reached only after very long periods, during which all signs and symptoms are less typical, less marked from that time on which infection took place. During this time, which marks the true incipiency of the malady and which anatomically is characterized by the formation of few isolated tubercles in lymph glands or lung tissue, no symptoms, or only vague general symptoms exist, and none on which to base a positive diagnosis of the disease. Investigation has shown that such infections are of very frequent occurrence, and that only in a comparatively small percentage of these cases does the disease develop further. This percentage, however, is sufficiently large to make tuberculosis the most destructive of all diseases, and the demonstration of its frequent and spontaneous arrest and of its curability by certain therapeutic measures at an early period of its development, must induce efforts of recognition long before the stage of phthisis is reached.

The discovery of the tubercle bacillus in the sputum of patients suffering from the disease constitutes a diagnostic means of indisputable accuracy. The consideration of the fact that tubercle bacilli can appear in the sputum only after the caseation and breaking down of a tubercle situated near a bronchus or bronchiolus, makes it certain that tuberculous changes occur previous to the appearance of the bacillus in the sputum. This is borne out by the clinical observation of a recognizable stage of tuberculous lung involvement, before bacilli are found in the sputum. The adoption of the term "closed," designating this stage, in opposition to "open," i. e., with bacilli found in the sputum, can be recommended for more general introduction.

From the therapeutic standpoint the diagnosis of pulmonary tuberculosis in its closed stage is of the utmost importance, the chances of permanent recovery diminishing proportionally with the postponement of rational therapeutic measures. These measures being, on the whole, nothing but a radical change in the patient's mode of life, will also interfere less with his usual occupations, the earlier the diagnosis is made. Hence also the paramount importance of an early diagnosis. The physician who declines to make a positive diagnosis of tuberculosis on account of the absence of bacilli in the sputum only, assumes a very grave responsibility, and great caution in this respect can not be urged sufficiently. Whenever certain signs and symptoms justify a suspicion of the disease, without there being positive evidence, it is wise to instruct the patient carefully as to his mode of life, to watch him closely, and to repeat the examination at stated intervals.

It may be said in general that a close and careful investigation of constitutional as well as local manifestations by the simplest methods will often reveal sufficient evidence for a positive diagnosis. The search for bacilli in the sputum, unfortunately, has brought about a neglect of these methods.

The history of the patient may or may not contain useful information; it ought to be carefully investigated in every case. Predisposing factors such as cases of tuberculosis in the family and among intimates, or an unhygienic mode of life, dusty and confining occupations, must all be taken into consideration; their absence in any one case, on the other hand, must not discourage further examination.

The symptoms of incipient tuberculosis will rarely offer anything typical. There may be very early hoarseness or a condition resembling that of chlorosis or neurasthenia, of bronchitis or dyspepsia. Cough may or may not be present. Hemoptysis, in the absence of other causes among all the symptoms which may be found in the history, is one of the greatest signs. Physical signs are sometimes absent for weeks after the hemoptysis. Vague as all these symptoms may be, they assume diagnostic value only when considered together with the results of a careful physical examination.

Here. inspection first of all will have to reveal conditions of stature and physical development which in their deficiencies we know to be indicative, if not of the disease itself, at least of a predisposition to it. Length and weight of body, circumference and degree of expansion of chest, are data of importance and in their correlation give indication of the bodily condition and state of nutrition. Still we must not depend on finding often the classical *habitus phthisicus*, the paralytic thorax, if we are to make an early diagnosis of tuberculosis. These data, however, as well as the determination of symptoms, are of greatest value as a guidance in subsequent examinations, and for that reason should not be neglected in any case.

Of great importance is the temperature. Even a slight rise of temperature in the afternoon, if other causes can be excluded, ought invariably to arouse suspicion. Very often this is overlooked, and to avoid such oversight great care in the measuring of the temperature is to be recommended. Whenever possible, a two-hourly record for a period of several days ought to be taken, a good thermometer to be placed in the mouth with tightly closed lips and held there for at least five minutes, the patient in a room of even temperature. It should also be remembered that in some tuberculous patients the rise of temperature appears only after some exercise, in women before and at the time of menstruation.

The physical examination of the chest by inspection, palpation, percussion and auscultation, if carefully and properly performed, will give more direct evidence than other methods. It may be said here that the newer methods of examination, notably that with the Roentgen rays, can not, at least in their present state of development, claim superiority over the results obtained by the before mentioned methods.

On inspection very often a retardation in the respiratory movements over the affected lung portion can be observed, especially over one apex. This retardation is more pronounced in a more recent involvement of the corresponding area of the lung (Turban). Foci of greater extent diminish the excursions of the diaphragm of the affected side; this can be demonstrated on the fluorescent screen, but equally well and without apparatus by the observation of the diaphragmatic excursions by means of Litten's shadow.

The vocal fremitus in early pulmonary tuberculosis gives little information. It may be increased or decreased over areas of pleural thickening; over pleuritic exudations it is always diminished.

Painstaking percussion and auscultation of the chest, over all parts and always comparing the two sides, is of the greatest value. The use of the blue pencil for marking the border lines and determining the excursions of the lungs can not be urged too strongly; strong percussion, on the whole, should be avoided. Marked dullness is but rarely found over portions of the lungs in incipient tuberculosis; however, the percussion will elicit sometimes a significant retraction of one apex as compared with the other.

In judging the results of the examination by auscultation it should always be remembered that many of the signs are subject to considerable variation, depending on the time at which the examination is made. Râles, which can be easily discovered in the morning, will regularly be absent during the afternoon. On damp and rainy days they will be found when they are absent in dryer weather. In women pulmonary signs are accentuated at the time of menstruation.

All these circumstances must be considered before a final judgment of the case is given.

Although every portion of the lung (including the lingula over the heart dullness) should be examined with the stethoscope, particular attention will have to be paid to the upper portions of the lungs and also to the lower borders and to the axillary regions.

The rough and slightly diminished respiratory murmur may be regarded as the earliest auscultatory sign in early pulmonary tuberculosis. The former must not be confounded with the sharp (puerile) respiratory murmur, which is more a sign of increased function than of swelling of the *mucosa:* both are vesicular murmurs. The rough character is produced by a succession of sounds, following each other too rapidly for aural differentiation. If the succession be less rapid, then we speak of an interrupted respiratory murmur, which suggests much coarser changes. Thus the rough murmur changes the character of the respiratory sound; it loses its "smooth" quality and becomes "impure and roughened" (Sahli). When these adventitious sounds become audible beside the vesicular murmur, then we can speak of râles. The rough murmur is produced by slight inflammatory changes in the bronchioles, the air passing over an uneven surface and through a slightly narrowed lumen. It is principally audible during inspiration over the apices and below the clavicles. This murmur precedes the appearance of râles (not the case, as a rule, with the puerile murmur), and this is the earliest auscultatory manifestation of tubercular involvement of the air passages. Distinct attention, therefore, should be paid to it. The appearance of râles over the apices (also in the axillary region) is next to it in importance. Râles indicate catarrhal conditions; with them the intensity of the vesicular murmur is usually diminished; this is also produced by the more pronounced swelling of the bronchial mucosa. In the earlier stages there are usually fine crackling râles, which can often only be heard directly after the patient has coughed.

Bronchial respiration is heard but rarely in early tuberculosis; when it appears, we have to deal with a more extensive process. By its localization in the apices and in conjunction with other signs, it is, of course, pathognomonic of consolidation; the same may also be said in regard to the other deviations from the normal respiratory murmurs, which are indicative of profound tissue changes. On the other hand, pleuritic friction is often heard at an early period, most frequently in or near the axillary line, between the sixth and eighth ribs.

Only passing mention can be made of other diagnostic methods, of which tuberculin is the most important. Although it is well understood that by injection of small doses of tuberculin and by the febrile reaction thus produced in tuberculous individuals, we can diagnose early tuberculosis, the method necessitates great care in its application and an apparatus too complicated for general use. The dangers of the preparation in the hands of one well acquainted with the method are very slight, but by applying carefully the other means of observation and examination, a case will rarely be found in which it would add considerably to the information gained.

The fact that certain salts, especially iodin salts, increase catarrhal symptoms and thus make them more perceptible to auscultation, has led to their administration for diagnostic purposes. For similar reasons a general introduction of this method can not be recommended.

The examination with *x*-rays has the drawback of a complicated apparatus; besides, its value over the other methods has not yet been satisfactorily demonstrated.

Various other methods have been advocated for the early detection of tuberculosis—inoscopy, sphygmograph, sphygmomanometry, serum test, etc.—all apt to increase our knowledge of the disease, but of no practical advantage in the every-day diagnosis of so frequent a disease. The careful and painstaking application of the methods well taught and well understood, with the simplest apparatus, but applied with a broad conception of the pathogenesis of the disease, will bring about much earlier diagnoses than are usually made.

Report of Committee on Influence of Climate in Pulmonary Tuberculosis.

A committee, previously appointed for the purpose and consisting of Drs. Charles L. Minor, Asheville, N. C., chairman; S. E. Solly, Colorado Springs, Colo.; E. R. Baldwin, Saranac Lake, N. Y.; C. F. McGahan, Aiken, S. C.; Henry Sewall, Denver, and Norman Bridge, Los Angeles, made a report, to which reference has been made on page 1805. The full report requires more space than we can devote to the subject this week, so we quote the concluding portion:

No advanced workers in this line would to-day, as was formerly done, place climate first in the order of therapeutic measures. Let it never be forgotten that hygiene, diet, teaching and supervision must *always* come first, but, granted that they are properly attended to, then enters the powerful rôle of climate, reinforcing and accentuating the effects of these other measures, and yielding results that can not be approached even with the same care and watching and food in less favorable climates.

Climate has been defined by Parke Weber as "a combination of various conditions of the atmosphere and earth's surface determining the suitability of a region or a site for the life and health of animals and plants," and climatotherapy as "the utilization of climate to promote the comfort and recovery of the sick or to prevent the development of disease."

W. L. Dunn has also well said that "a climatic resort is a place where there is a maximum of sunshine, a minimum of fog and mist, relatively few hours of rainfall, a relatively low humidity, great purity of the atmosphere and an opportunity for efficient medical supervision." Altitude is not referred to here, despite its great value, as not being a factor in all climates beneficial in tuberculosis.

To discuss here the various forms of climate is not within our province, but it should rather be our effort to point out what in general are the effects which in climate have a beneficial influence. These can be classified in the order of their importance as: 1. Abundance and bacteriologic and chemical purity of the air; 2, sunshine; 3, coolness, or, in a certain number of cases, warmth; 4, dryness, or, in a few cases, a moderate degree of humidity; 5, altitude; 6, wind; 7, equability; 8, soil.

The bacterial and chemical condition of the air has been carefully studied and has been found to vary from a very high pollution in the streets of our large cities to an almost absolute purity in high mountains, open seas, deserts and arctic regions, and is very low in country and mountain climates, especially when sparsely settled.

Recalling the powerful rôle of streptococcal and other mixed infections in pulmonary tuberculosis and their power of changing a simple tuberculosis with chronic advance into a destructive consumption, noting also the bad effects of dusty atmospheres in producing bronchial catarrh, and especially the rapid lessening of mixed infections and such catarrhs in the purer air of our climatic resorts, the importance of this factor does not need to be further dwelt on. We would only here note that we believe it is chiefly due to the reinfection of the diseased lung by pus organisms and its irritation by dust, to which is often due the relapses of some cases when they return to city life.

After pure air we would place sunshine and sun heat, whose effects are both direct and indirect. Directly while its effects are evidently beneficial, they have never been completely analyzed and, therefore, will not be dwelt on here. The indirect effects of sunshine as seen in its powerful stimulation of the patients' spirits is of great importance.

Dryness in most cases is a most important factor through its valuable anti-catarrhal effects, but, when extreme, this influence may be reversed and there are not a few cases in which a moderate degree of humidity is more beneficial.

Generally, low relative humidity with moderately low temperatures has a tonic effect and is beneficial in irritated conditions of the respiratory mucous membrane, while such low humidity with very low temperatures, while stimulating, is apt to irritate the mucous membrane. Low relative humidity with high temperature is generally debilitating. High relative humidity and moderate temperature is soothing to the irritated mucous membranes, but high humidity combined with low temperature favors catarrh. On the whole, in pulmonary tuberculosis, low relative humidity with moderately low or low temperatures is most generally suitable, and the average tuberculous patient always makes his best gains in cold, dry weather, where such conditions prevail, but there are certain cases which do better with a high relative humidity and warm temperature.

Equability in older people or in the very feeble can be of great value, but is not as important as used to be supposed. In stronger cases variations in temperature stimulate the vital activities; hence, generally speaking, equability is not an important factor.

Wind, when the patient is directly subjected to it, is harmful, but when he is properly protected its purifying influence on the air, provided vegetation is sufficient to prevent dust-storms, is beneficial.

Altitude.—Most authorities are agreed that, other things being equal, some degree of altitude, owing to the great purity of the air and to its stimulating effect on the metabolism and appetite, etc., is most desirable, but it is not here our function to discuss the large question that this opens up. Enough to say that care should be used to choose an altitude suited to the patient's degree of vitality and heart power.

But a study of these local conditions and their adaptability to any given case is not enough. The temperature of the patient should be studied, as well as his docility and intelligence, for these play an important part in getting the best results from a climatic cure. In a few homesickness can be so severe and unyielding as to make a departure from home impossible. Others are so intractable and so unwilling to obey any instructions that they are apt to injure themselves by imprudences.

Above all, the financial condition of the patient is a determining factor, for, as one of your committee has elsewhere written, "If, however, one has to choose between treating patients in narrow circumstances in their own homes or sending them to a resort where their poverty will not enable them to get the necessary conditions of quarters, diet and care, which are so essential, by all means let them stay at home. By changing their houses, by moving to the top floor, using the roof as an outdoor sun parlor, and spending the utmost possible part of their time there, by economizing in every other way in order to be able to spend more freely for good food and cookery, much can be done, provided always that their lives can be properly supervised. Where pecuniary reasons prevent the patient from seeking a special climate, excellent results can thus be had, though with greater difficulty, in the patient's home, if the case is not too far advanced and that home not too miserable."

For the submerged tenth climatotherapy, save as supplied by the municipality or state, or philanthropic effort, is an impossibility and even the getting of proper conditions in their own homes is for them a Utopian idea. That municipal or state sanatoria have been opened for this class near our cities, but in localities whose purer air and favorable conditions mark them as climatic resorts, gives hope in this direction, but the only permanent results among the poor will come from a prophylaxis based on teaching them decent modes of life, on improvement of bad sanitary conditions and on a change in the impossible hygiene of their lives. For those in modest or narrow circumstances it is only desirable when they will be able to get at the resort equal or better conditions than they could have at home. For those who are comfortably off, or for the well-to-do, it seems to your committee that there can not be a moment's doubt that any results that they could obtain at home by the most careful treatment, even if their home doctors are absolutely familiar with the kind of detailed and personal work which these cases require, can be infinitely improved and the percentage of cures or arrest greatly increased by the carrying out of similar treatment under the favorable influences of climate.

We would here also say that, with rare exceptions, the patient who leaves the resort, however well he may be and however great the improvement in his physical findings, should not be told that he is cured, but only that the process is arrested and that if when he returns home he, by faithful living, can show for two years a continuance of such conditions, that then he may justifiably consider himself cured.

A misunderstanding of this fact is largely responsible for the popular condemnation of climatic cure. A climatic resort should be looked on as a university where the patient goes to get, under proper conditions, that discipline and instruction which he will bring back with him into his daily life at home, where he should serve as a teacher of those with whom he is thrown, and the physician in a climatic resort will be of use to his patient in proportion as he is able to be a forceful and stimulating teacher.

AMERICAN GYNECOLOGICAL SOCIETY.

Thirtieth Annual Meeting, held at Niagara Falls, May 25-27, 1905.

Under the Presidency of Dr. E. C. Dudley of Chicago.

Accidental Rupture of the Non-Parturient Uterus, with Report of Cases.

Dr. George W. Jarman, New York, reported five cases of accidental rupture of the non-parturient uterus, and drew the following deductions from his own cases and those reported by others: 1. That the operation of invading the cavity of the uterus should not be regarded lightly, and that the same care in the details of asepsis should be carried out as in a laparotomy. 2. That great care should be used in the introduction of steel dilators, and at no time forcing them into the cavity of the uterus. 3. That as one's experience in gynecology increases, the use of the uterine sound decreases, and the fingers more and more frequently take the place of the curette to remove secundines from the uterus. 4. That sterile water is the best fluid for irrigating the uterine cavity. 5. That if a rupture or perforation of the uterine wall occurs, it is better to perform a laparotomy and assure one's self of the safety of the patient than to hope that no untoward results will ensue. 6. That if one can not be certain of the asepsis of the curettage, it is better to use a small drain through the vagina, and a slightly elevated posture of the patient, than to regret its non-use after the development of septic peritonitis. 7. That in properly conducted cases observed soon after the accident, there should be almost no mortality.

DISCUSSION.

Dr. A. Palmer Dudley, New York, said he has perforated the uterus four times. In one case, after introducing the instrument into the uterus, he withdrew what he supposed was a fungous growth or secundines, but which proved to be eight inches of small intestine. The intestine was pushed back through the opening made in the uterus and the patient let alone. She has since borne two children.

Dr. Herman J. Boldt, New York, said that a perforation of the uterus does not always cause serious trouble. Great discrimination should be used in those cases in which there is danger. In all instances of criminal abortion, where there is any suspicion that infection has taken place, the abdomen should invariably be opened. He has perforated the uterus a number of times, and has seen it perforated by others.

Dr. Eugene Boise, Grand Rapids, Mich., reported two cases of perforation of the uterus, one of which occurred in 1871. The physician in attendance passed a sound clear up to its handle. Nothing was done and the patient developed no symptoms. In the other case the uterus was perforated with a curette; the cavity was thoroughly washed out, the patient put to bed without anything further being done, and she made an uninterrupted recovery.

Dr. Fernand Henrotin, Chicago, has seen five cases in which the uterus was perforated. One was accidental. One was the result of the work of an abortionist, and on opening the abdomen, nine days after the supposed operation, the patient being septic, he found a bougie nine inches long in the abdominal cavity. The patient recovered after undergoing a severe trial.

Dr. Andrew F. Currier, New York, agreed with the previous speakers that in many of the cases in which perforation occurs no damage will result if the intestine has not been withdrawn. If there is a mere puncture of the uterus, if the woman is not septic, it is safe to leave her alone and do just as little manipulation as possible. But supposing the uterus was in a soft, friable condition, one is confronted with the alternative of either closing the perforation or of removing the uterus. In many cases the removal of the uterus is preferable, and more than likely will result in more benefit to the patient than the mere closure of the rent or perforation. The key to successful treatment is complete drainage, and if there is already a septic uterus and one simply closes the wound, he is by no means sure that the sepsis will not continue. In cases of that kind, it is prudent to remove the uterus, leaving the wound in the vagina open and establishing free drainage.

Dr. A. Lapthorn Smith, Montreal, does not think the curette is responsible in most cases for perforation of the uterus. He confessed to having perforated this organ six or eight times, and he has no fear of the result if the parts are thoroughly aseptic.

Dr. Clement Cleveland, New York, perforated the uterus with a sharp curette on one occasion when he was talking to his class about the carefulness with which the instrument should be used. The patient was to have been operated on for a lacerated cervix and lacerated perineum. He immediately postponed the operation, put the patient to bed, and no bad results followed. He thought the society should exercise its influence toward eliminating the sharp curette from the bag of the general practitioner, as it is fraught with the greatest harm to women if used in the careless way it is to-day.

Dr. Wm. E. Moseley, Baltimore, said that both the dull and sharp curettes have their place. Personally, he first introduces the dull instrument for diagnostic purposes, and then the question as to whether the dull or sharp curette shall be used depends on the character of the tissues he has to deal with. There are some cases in which there is more danger of perforating the uterus by the use of the dull than by the sharp curette.

Dr. Wm. H. Wathen, Louisville, does not think the dull curette has any place in the surgery of an experienced gynecologist. The man who can not use a sharp curette without injuring his patient or perforating the uterus had better refer his cases to someone who can. Occasionally cases are reported where the uterus has been perforated by experienced operators. Curettage should be done by the sharp curette, or decidual remains should be removed by the finger.

Dr. Ely van de Warker, Syracuse, N. Y., stated that uterine curettement is attended with more or less danger, and should be confined to the hands of good gynecologists, and rarely ever or never done by the general practitioner.

Dr. Seth C. Gordon, Portland, Maine, said that occasionally he has pushed a sound through the uterus, but by leaving the patient alone he has not seen any harm result.

Dr. P. A. Harris, Paterson, N. J., has perforated the uterus twice, once through the corpus posteriorly and once anteriorly. The perforation posteriorly was done by the curette, and the one anteriorly by his dilator. With his present dilator there is a device attached to it which registers the exact number of pounds exerted by the operator in dilating the cervix.

Dr. T. A. Reamy, Cincinnati, Ohio, said that perforation of the uterus was an accident liable to happen to any man. He had perforated the uterus with a sharp curette within the last two years. He curetted a woman a short time ago whose condition was such that his consultant was in doubt as to whether she had cancer of the body of the uterus or whether it was the result of a chronic endometritis. In curetting the uterus rather thoroughly he accidentally perforated it. A pelvic abscess resulted, which was opened, and the patient made a good recovery.

Dr. E. C. Dudley, Chicago, stated that within five weeks he perforated a uterus with the curette. The uterine wall was not more than a thirty-second of an inch thick, the thinness being due to a localized pathologic condition. A considerable quantity of bloody fluid was found in the cul-de-sac of Douglas, which was sponged out, the abdominal cavity flushed out with salt solution, and after closing the wound in the uterus with a purse-string suture, the abdominal wound was closed, and the patient made a good recovery.

Treatment of Retroversion of the Uterus by Shortening the Utero-sacral Ligaments.

Dr. A. W. Johnstone, Cincinnati, stated that the first step in either retroversion or prolapse is due to a stretching of the utero-sacral ligaments. This stretching is most commonly due to a low grade of infection spreading to these ligaments from the uterus or other contiguous structures, that made them lose their tone. A few cases are due to direct violence. The operation consists in shortening the utero-sacral ligaments through the vaginal incision. The uterus is replaced and the prolapse cured. Shock is *nil*, and convalescence smooth.

of the students, the school could not be maintained with success. The hospital was an adjunct or a part of the medical school. Whatever gain might result from the operation of the medical school went to the owners of the property. While the evidence showed a great deal of charity work was performed in the treatment of patients and in dispensing medicines, still the institution was conducted for profit, and, as it was operated for gain, no part of it was exempt from taxation, under the constitutional provision quoted.

Radiographs.—The Supreme Court of Iowa says, in the case of State vs. Matheson, that the process of *x*-ray photography is now as well established as a recognized method of securing a reliable representation of the bones of the human body, although they are hidden from direct view by the surrounding flesh, and of metallic or other solid substances which may be imbedded in the flesh, as was photography as a means of securing a representation of things which might be directly observed by the unaided eye at the time when photography was first given judicial sanction as a means of disclosing facts of observation; and for that purpose *x*-ray photographs, or skiagraphs, or radiographs, as they are variously called, have been held admissible on the same basis as photographs. Therefore the court has no difficulty in holding that a radiograph admitted in evidence in this case, after proof that it was taken by a competent person, was admissible to show that there was in the body of the person of whom it was taken, at the time it was taken, some hard substance, in the shape of a bullet, near the spinal column. True enough, there was no evidence that this object which was represented in the radiograph was a bullet, but it was proper for the jury to take the evidence for what it was worth, as indicating that something in the shape of a bullet was lodged in the man's body. Whether it was in fact a bullet, they must determine, just as they would have been required to determine the fact if the witness had testified that he saw something the size and shape of a bullet. That was all he could have told simply by looking at it if it had been exposed to view. Of course, evidence as to the location of the bullet at a time subsequent to that when it first lodged there after being fired would not be material in determining the course that it took, unless there was some reasonable ground for assuming that its location had not changed in the meantime. But the court thinks it can properly take judicial notice of the fact that a bullet imbedded in human flesh usually becomes encysted, and does not change its location without external interference. And it seems to the court that the probability that the bullet when discovered by means of the radiograph was in the same position that it was when first lodged in the man's body was sufficiently strong to have warranted the jury in taking the information furnished by the radiograph for what it was worth, in their judgment, in determining whether the course of the bullet after entering the body was downward or upward.

Violation of Practice Act by Fitter of Glasses.—Section 21 of chapter 176 of the laws of South Dakota of 1903, regulating the practice of medicine, provides that: "When a person shall append or prefix the letters M.B., or M.D., or the title Dr. or Doctor or any other sign or appellation in a medical sense to his or her name or shall profess publicly to be a physician or surgeon * * * he or she shall be regarded as practicing within the meaning of this act." The defendant in the case of State vs. Yegge, who was charged with practicing medicine without a license, had a sign in front of his office with the name "Dr. Yegge" thereon. There was also introduced in evidence the following notice: "Ophthalmology. A Science for the Analysis of the Cause of Human Ills and How to Abolish Them. Everybody should know that this is a science that practices by guesses. It differentiates between functional derangements and disease. By its assistance nature cures cross-eyes, without operation; headache without drugs; hysteria without a straight jacket; female disorders without a trip to the hospital; and hundreds of nervous troubles. Simply removing causes is the secret. A true Ophthalmologist explains your case to you. Dr. M. F. Yegge," giving address and location of office. The Supreme Court of South Dakota thinks it was quite clear from the evidence that the letters "Dr." were used in a medical sense, and affirms a conviction. It says that the legislature evidently intended, in enacting the law, to prevent persons not properly educated in the science of medicine from assuming to act as a physician, and to protect the public, and it has deemed it proper that every person assuming to act as a physician or surgeon should be properly licensed. In carrying into effect this law, it was competent for the legislature to define, as it has assumed to do in Section 21, what evidence shall be deemed sufficient to constitute a practitioner within the meaning of the act. In view of the testimony of the physicians as to the proper definition of ophthalmology, it was quite clear from the defendant's advertisement that he had assumed to hold himself out as a physician within the meaning of the act. And it was not only clear from the language of the advertisement itself, which would be generally understood as an assumption on his part of being a regular physician, or at least a specialist in that branch of medicine treating of ophthalmology, but the legislature has declared that prefixing the term "Dr." to his name should be so regarded. The law should not be so construed as to deprive the people of the benefits intended by the act, but such a construction should be given it as to carry into effect the evident intention of the legislature.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

May 27.

1 *Intermittent Claudication and Allied Syndromes Due to Angiosclerosis of the Extremities. J. R. Hunt, New York.
2 *Gardener's Spade Deformity and the Silver-Fork Deformity in Fractures of the Carpal End of the Radius. J. B. Roberts, Philadelphia.
3 *Changes of View in Appendicitis Work. R. T. Morris.
4 *Toxemia of Intestinal Origin as a Condition Predisposing to Minor Infections. H. A. Houghton, New York.
5 Responsibility in Mental Deformity. J. Weir, Jr., Owensboro, Ky.

1. **Intermittent Claudication and Allied Syndromes.**—Hunt has made an exhaustive study of all aspects of this affection, which was first described by Charcot in 1858. Alcoholism, syphilis, gout, nicotinism, diabetes, exposure, flatfoot, compression by a truss, aneurism, the neuropathic diathesis, and congenital insufficiency of the cardiovascular apparatus are cited as etiologic factors. The pathologic findings may be summed up in one word—angiosclerosis, though in advanced cases secondary changes of a trophic nature frequently occur, and the vasomotor element is also of importance in producing the spasm. While the typical picture of the disease comprises intermittent limping, with the paroxysm during activity and complete freedom during rest, sensory symptoms and weakness, in some cases, may be present more or less constantly and may give rise to errors in diagnosis. Cases in which the anus, rectum or bladder, brain, kidney or retina were affected have been recorded, and it is also thought that the paroxysms of angina pectoris may be referable to a similar condition of the coronary arteries. The prognosis as regards cure is unfavorable, but by suitable treatment, consisting of rest, potassium iodid, cardiac tonics, warm foot baths and galvanic foot baths, much may be done toward warding off indefinitely the threatened gangrene. Digitalis, ergot, nitroglycerin, and very hot or very cold baths should be avoided. Four illustrative cases are described, and in conclusion the author says that angiosclerosis of the extremities in its gravest form, uncomplicated by a vasomotor neurosis, leads to spontaneous gangrene. If the angiosclerosis occurs in combination with a vasomotor instability and a tendency to vasomotor spasm, the syndrome of intermittent claudication results. This is characterized by the development of sensory (pains and paresthesia) and motor (weakness and rigidity) manifestations during the functional activity, with a rapid and permanent restoration to the normal during rest. The syndrome, however, has a wider and more general application to the whole circulatory

mechanism and has been observed in relation to various organs of the body (heart, intestines, brain, kidney and eyes).

2. **Deformity in Fractures of Carpal End of Radius.**—Roberts directs attention to the fact that in addition to the so-called "silver fork" deformity produced in fractures of the carpal end of the radius when the lower end of the bone is forced backward, there occurs in some cases a different deformity due to forward displacement. In such instances, instead of the classical picture presenting a convexity over the dorsum of the wrist, the convexity is in front, and the planes of the forearm and hand are related to each other much like those of the handle and blade of the gardener's spade. Great force is often necessary in dislodging the small radial fragment from its new position; but unless this is accomplished the fracture is not reduced. Various types of such fractures, together with appropriate forms of dressing, are shown in numerous illustrations.

3. **Changes of View in Appendicitis Work.**—Morris says that although formerly he used to forbid morphin altogether, his views on the subject have changed, and he now gives it cautiously in cases in which there is great restlessness. Both gauze packing and iodoform gauze have been abandoned altogether, as well as the use of buried sutures of silkworm gut. A standard length of one and one-half inches for the incision has been adopted for nearly all instances, including cases of abscess and peritonitis, and it has been found safer to deal with adhesions by touch than by sight. The time limit has also been greatly reduced, and now it is common to have the time from the first incision to the last suture occupy not more than seven or eight minutes. All patients are operated on, even if moribund, a preliminary infusion of salt solution being given; adhesions are freely separated if necessary, but not otherwise, and the idea of flushing out the abdomen has been dropped. After eliminating the features which seemed to have a special death rate of their own, viz., gauze packing, iodoform gauze, long incisions, and the expenditure of time in unnecessary detail of work, 100 consecutive operations were reported with a 2 per cent. death rate. The author does not favor the removal of the normal appendix in the course of other operative work, and he now uses a cigarette drain in all cases in which pus and septic débris have been left in the peritoneal cavity. The dictum of operating as soon as the diagnosis is made holds good, with certain exceptions, but it is still a question what to do with patients who are convalescing from the attack. In interval cases it now seems best to operate only when, on palpation, the appendix is found to be the definite seat of chronic infection or of adhesions which cause symptoms.

4. **Toxemia of Intestinal Origin Predisposing to Minor Infections.**—Houghton describes 30 cases of minor infections, in nearly all of which a toxemia of intestinal origin appeared to be present. Examination of the urine showed that 27 out of 30 patients had an excess of indican; 1 case presented glycosuria and indicanuria, 1 glycosuria, and 1 tuberculosis. The conclusion is that in many cases of vital decrease manifested objectively by minor septic infections, toxemia of intestinal origin may be regarded as the predisposing cause. The practical bearing of this conclusion is far reaching and explains such problems as that encountered by the surgeon when two patients of apparently similar vitality show a great difference in recuperating powers after the same operation, or why one exposed person contracts an infectious disease and another does not. The practical application of the conclusion means attention to the proteid fermentation taking place in the bowel, particularly in those cases in which the urine presents a large amount of indican. It is not sufficient simply to produce evacuation of the bowels. The indicanuria must be treated by diet and other procedures looking toward its complete cessation. This will undoubtedly completely cure many troublesome cases of recurring minor infections.

American Medicine, Philadelphia.

May 27.

6 Ailurophobia and the Power to be Conscious of the Cat as Near, When Unseen and Unheard. S. W. Mitchell, Philadelphia.
7 Observations on Amebas Infecting the Human Intestine, with a Description of Two Species, Entameba Coli and Entameba Dysenterie. C. F. Craig, San Francisco.
8 *Chylous Ascites. J. F. Bell, Englewood, N. J.
9 *Results of Abdominal Operations. G. E. Shoemaker, Philadelphia.
10 The Lloyd Reaction for Morphin and Other Alkaloids. D. W. Fetterolf, Philadelphia.
11 Acute Carbon Bisulfid Poisoning. A. P. Francine, Philadelphia.

8. **Chylous Ascites.**—Bell cites the case of a man aged 57 from whom 106,370 c.c. of fluid were withdrawn in about ten weeks. At the last paracentesis the patient weighed but five pounds less than his normal average. The history would suggest a rupture of a large lymph duct, the thoracic duct, the receptaculum chyli, or a chylous cyst of the mesentery which has continued to discharge into the peritoneal cavity. The cause of the rupture is unaccounted for.

9. **Some Results of Abdominal Operations.**—Shoemaker deals with 100 unselected, consecutive cases, with 5 deaths, one patient moribund when admitted and rapidly incised for pus drainage without diagnosis; 1 seen two weeks after onset with gangrene of several feet of small intestine; 2 bad chronic pus cases, and 1 patient with chronic inflammation of tubes, ovaries and appendix. In the 95 recoveries, hysterectomy was done 20 times; 9 times for malignancy. In malignant cases, the growth was separated through the vagina, followed by removal of the uterus through a suprapubic incision. In the 12 cases of fibroid tumor, hysterectomy by supravaginal amputation was done. Operation was done primarily for appendicitis 11 times, but in the course of other abdominal operations the appendix, not being normal, was removed in 22 other cases, so that altogether in one-third of the cases of the series the appendix was removed. The removal of the appendix probably increases the risk of the primary operation to a very slight degree, and is not advised under favorable conditions, as in a complicated hysterectomy. Of the 6 extrauterine pregnancies, all the patients recovered. A large number of other operations were done in a corresponding period, such as plastic perineal work, suspension of the kidney, curetting, etc., some of these operations being done in combination with abdominal section and all without mortality. In 68 per cent. of the cases requiring perineal repair, the anterior vaginal wall was also treated by the excision method.

Medical News, New York.

May 27.

12 Clinical Features and Treatment of Epidemic Cerebrospinal Meningitis. F. Huber, New York.
13 *Infantile Tuberculosis; Its Portal of Entry, Topography and Clinical Manifestations. R. G. Freeman, New York.
14 *Two Unusual Cases of Gastric Cancer. W. F. Cheney, San Francisco.
15 Present Clinical and Bacteriologic Status of Vincent's Angina. Wm. N. Berkeley, New York.
16 *Widal Reaction. E. Andrade, Jacksonville, Fla.

13. **Infantile Tuberculosis.**—According to Freeman, tuberculosis in infancy arises most often from an infection through either the respiratory or alimentary tract; the comparative frequency of these two modes of infection has not yet been definitely determined. The tuberculosis of early life is most common during the first year, when children are on an exclusive milk diet; much milk contains tubercle bacilli, and bovine tubercle bacilli are pathogenic for man. At this period, owing to the structure of the intestinal wall, bacteria can probably pass through it, although it is uninjured. Experiments on animals show that inhalation tuberculosis causes usually lesions of the bronchial lymph nodes and lungs alone, while, wherever the portal of entry, these structures become very early involved. Inoculation experiments prove that the mesenteric lymph nodes may be tuberculous without the presence of any gross lesions in them. Twenty-six and one-half per cent. of the 158 autopsies on tuberculosis cases at the Foundling and Nursery and Child's hospitals, which Freeman has tabulated, show intestinal or mesenteric lesion on gross examination. The tuberculosis of infancy, unlike that of later life, is usually an acute, widely disseminated, general disease, with moderate temperature and few symptoms and physical signs; unless the invasion of the meninges gives rise to symptoms. Tuberculosis of the cervical lymph nodes and of the

joints is rarely seen under the third year. The power to overcome a tuberculosis infection that has spread from the lymphatics and invaded the organs apparently does not exist in infancy. A series of autopsies in the same institutions, in which the intestines were carefully examined without being separated from the mesentery, and with microscopic examination of all suspicious thickenings, would probably show a much larger proportion of intestinal involvement, and a still greater proportion could be found by animal inoculations.

14. **Unusual Cases of Gastric Cancer.**—The first case cited by Cheney presented symptoms pointing toward either cancer of the liver or syphilis of the liver, with the probabilities in favor of the latter, because of the good nutrition of the patient, the absence of pain and of the usual symptoms accompanying malignant disease. The autopsy disclosed a carcinoma of the stomach, with metastatic tumors in the liver and elsewhere. The second case was looked on as one of secondary anemia, probably due to chronic malaria, the symptoms all pointing in that direction. An operation was finally thought necessary, and on opening the abdomen the tumor, which was thought to be an enlarged spleen, was found to be an enormous carcinoma of the splenic end of the stomach. In both these cases there were peculiarities in the clinical history and physical findings that made the diagnosis of gastric cancer unsuspected.

16. **Widal Reaction.**—From a careful comparison of the results obtained from the examination of 300 specimens of typhoid blood with both living and dead cultures of typhoid bacilli, Andrade concludes as follows: 1. Living and dead cultures are about equally sensitive to the action of the agglutinins of typhoid fever, though in dead culture the reaction may require a longer time to take effect, and it is, therefore, necessary to keep the specimen under observation for two hours. In some cases, the reaction is quicker with the dead than with the living cultures. 2. The dried blood method is equally effective with dead as with living cultures. 3. The reaction, when it takes place, is more characteristic with dead cultures than with living cultures. There are no pseudoreactions with dead cultures. 4. Dead cultures do not seem to lose their sensibility to the agglutinins of typhoid fever for a long time. Andrade has now in use a dead culture which was prepared six months ago, and it reacts just as typically as when first used.

New York Medical Journal.

May 27.

17 *Intermittent Angeiospasm on the Basis of Chronic Malaria. F. Schwyzer, New York.
18 Acute Appendicitis. L. Brinkmann, *Philadelphia.*
19 *The Surgical Paradox. E. Van De Warker, Syracuse, N. Y.
20 Malposition of the Abdominal Viscera and Medical and Surgical Treatment for Some of the Acute Cases. G. E. Benninghoff, Bradford, Pa.
21 Case of Extreme Sepsis from Multiple Sinusitis, with Description of Operation. W. W. Carter, New York.
22 Diagnosis of Chicken-pox. W. L. Somerset, New York.
23 Mental Wards in General Hospitals. J. N. Mosher, Albany, N. Y.
24 Abortive Treatment of Gonorrhea in Man. Report of a Case. G. Gross, San Francisco.

17. **Intermittent *Angeiospasms on* Basis of Chronic Malaria.**—Schwyzer describes 8 cases which exhibited a number of symptoms in common due to a disturbance of the vasoconstrictor nerves caused by chronic malaria. Each patient gave a malarial history, and showed the external signs of chronic malaria. In each, the spleen was either large, or very large, and hard, when palpable; in most of them the liver was enlarged. A detailed analysis is made of the symptoms manifested in each case, from which the author concludes that these were cases of what he terms malarial *angiospasm*. The treatment of this form of malaria does not differ from that of chronic malaria in general.

19. **Surgical Paradox.**—Van de Warker's paper is essentially a plea for better teaching of surgery, *and more of it*, in medical colleges.

Boston Medical and Surgical Journal.

May 25.

25 *Consideration of the Pelvic Articulations from an Anatomic, Pathologic and Clinical Standpoint. J. E. Goldthwait and R. B. Osgood, Boston.
26 Foreign Body in the Esophagus. A. Coolidge, Jr., Boston.
27 *Conservative Operation on the Ovaries and Tubes: Analysis of Ninety Cases. R. G. Wadsworth, Boston.

25. **Pelvic Articulations.**—Goldthwait and Osgood present a complete study—anatomic, pathologic, and clinical—of the pelvic articulations for the purpose of calling attention to certain conditions concerning which the knowledge of the profession has been much less than the importance of the symptoms and the frequency of occurrence seem to justify. Their work, as well as the work of other investigators, makes it quite plain that the pelvic articulations, especially the sacro-iliac synchondroses, are by no means as stable as has been supposed, and that in man and woman definite motion exists under normal conditions. Clinical cases are divided into three groups; the first including the cases in which there is definite relaxation associated with pregnancy, representing an exaggeration of a normal condition; the second, the cases in which the relaxation is associated with menstruation, apparently representing also a physiologic condition, apart from any pathologic change with which we are at present familiar; and the third, the cases in which the lesion is due to trauma, general weakness, or some definitely known pathologic process. The authors discuss, in full, the clinical history of cases coming under this classification, mentioning particularly the methods of demonstrating the mobility of affected joints, demonstrating disease of joints, and the various forms of support used to relieve the strain on these joints.

27. **Conservative Operations on the Ovaries and Tubes.**—Wadsworth contributes the result of a detailed study of the after histories in 90 cases in which a conservative operation was done on the ovaries and tubes. Taking the series as a whole, 51 per cent. of the patients were cured, 35.5 per cent. were relieved, and 13.5 per cent. were not relieved. In 52 of the 90 cases, however, retroversion of the uterus was corrected, and in many of them lacerations were repaired. Therefore, these cases should be considered separately, since in them the symptomatic result is only in part due to the operations on the appendages. Of these 52 patients, 48 per cent. were cured, 36.5 per cent. were relieved, and 15.5 per cent. were not relieved. Of the remaining 38 patients, in whom the appendages only were diseased, 55.5 per cent. were cured, 34 per cent. were relieved, and 10.5 per cent. were not relieved. In 64 patients in whom one ovary was normal and the other was either resected or removed for cystic disease, 7 (11 per cent.) have come to second operation, while in 20 patients in whom both ovaries were cystic, and part of one or both were saved, 6 (30 per cent.) have had a second operation. In these 64 patients there was possibility of future pregnancy, and 17 (26.5 per cent.) have become pregnant, 13 of this number (20 per cent.) having a normal delivery at term, and 4 one or more miscarriages. Considering the cases together, without regard to the extent or multiplicity of operation, partial or complete symptomatic relief has been obtained in 86.5 per cent. Multiple operations give less good results as a whole than operations on the appendages alone, there being half again as large a per cent. of failures in the former class. When both ovaries are cystic and part of one or both are saved, the chance of secondary operation for recurrence of cystic disease is nearly three times as great as in those cases in which one normal ovary is present. In estimating the likelihood of subsequent pregnancies in any given case, the fact that the patient has borne children before operation nearly triples the chance of subsequent pregnancy.

Lancet-Clinic, Cincinnati, Ohio.

May 20.

28 Two Cases of Otitic Brain Abscess. G. F. Keiper, La Fayette, Ind.
29 Brief History of the Medical Libraries of Cincinnati. H. W. Bettmann, Cincinnati.
30 Value of a Medical Library to the Community. D. I. Wolfstein, Cincinnati.
31 *Suggestion as to the Treatment of the "Spotted Fever" of Montana. P. M. Ashburn, Ft. Missoula, Mont.
32 Eye, Ear and Throat Sequelæ of Diphtheria. L. D. Brose, Evansville, Ind.

31. **Treatment of Montana Spotted Fever.**—Ashburn (The Journal, May 27, 1905, p. 1686) recommends in the treatment

of this disease the Brand treatment of typhoid, plus the occasional use of normal salt infusions and a few medicines, principally calomel, alcohol and strychnin. He advises the immersion of each patient presenting a temperature of 102.5 F. in water having a temperature of 70 F., and keeping him there, constantly applying hand frictions to the body and limbs, with cold applications to the head, from ten to twenty minutes, according to effect, repeating this procedure every three hours as long as the temperature remains above the point indicated. This bath should be preceded by the administration of a stimulant (Ashburn prefers alcohol), and followed by a quiet rest in bed, under blankets, and, if necessary, with hot water bottles at the feet. Ashburn sounds the following note of warning: 1. That the lower the temperature of the water (below 60 F., say) the greater the contraction of the blood vessels of the skin, the slower their consequent dilatation, and the smaller the reduction of temperature and the greater the internal congestion. 2. That without friction a moderately cold bath (70 F.) may do harm in the same way, and may *fail to reduce temperature*. 3. That until reaction occurs the circulation is not benefited, and that to hasten reaction by friction is absolutely necessary for this reason also. 4. That the effect on the circulation, because in that way the condition of the skin, kidneys, lungs, nervous system and temperature itself are beneficially influenced, is the most important object to be attained. 5. That water not cold enough does not cause the primary spasm of the skin vessels, without which the tonic dilatation does not follow. 6. That alcohol or hot coffee by the mouth and ice water by the rectum add to the efficiency of the bath and hasten reaction. 7. That, while the temperature may be used as a guide within considerable limits, the circulation being most what we want to influence, the baths should be given at such fairly regular intervals as to exercise a continuous, beneficial effect on it, and should be graded by its condition rather than by the temperature.

St. Louis Medical Review.

May 20.

33 Malignant Tumors of the Extremities. C. G. Cumston, Boston.

Illinois Medical Journal.

May.

34 *Surgical Analgesia from Spinal Cocainization. A. E. Halstead, Chicago.
34½ Multiple Neurofibromata. R. B. Preble, Chicago.
35 *Larvated Forms of Exophthalmic Goiter. L. H. Mettler, Chicago.
35½ Pleurisy. A. R. Edwards, Chicago.
36 Diagnosis of Appendicitis in Children. J. H. Hess, Chicago.
37 Water Supply. J. M. G. Carter, Waukegan.
38 *Surgical Treatment of Sciatica. M. R. Barker, Chicago.
39 Some of the Newer Remedies. J. C. Beck, Chicago.
40 High Forceps, Pelvic Inlet Forceps; Its Indications and Relations to Forceps and Version. G. Schmauch, Chicago.
41 *Prison Tuberculosis. E. E. Tracy, Chicago.
42 Sterility in the Male. A. Schalek, Chicago.
43 *Two Cases of Complete Perineal Prostatectomy* by Young's Technic. J. Frank, Chicago.
44 Differential Blood Count, Technic and Clinical Value in Septic Cases. C. Hill, Chicago.
45 Bronchoscopy for the Removal of a Collar Button from the Lung. E. F. Ingals.
46 Colle's Fracture. E. A. Edlen, Moline.

34. **Spinal Cocainization.**—Halstead believes spinal analgesia is contraindicated in all cases in hysterical women, in young children, and in the insane. It should be used only when its action can be explained to the patient, and thus co-operation secured. Halstead does not consider any ordinary heart lesion a contraindication to its use. Any marked idiosyncrasy for cocain should constitute a positive contraindication against spinal analgesia. The surgical indications for spinal cocainization given by Halstead are the following: 1. In operations on the lower half of the body, when, from kidney, lung or heart disease, a general anesthetic is dangerous. and where infiltration or analgesia from neural injections of cocain are not possible. 2. In strangulated hernia or intestinal obstruction from other causes, and perforations, where considerable time may be required, thus contraindicating the use of local anesthesia. *Spinal cocainization* is an *ideal* method of securing analgesia, first, because the patient remaining conscious is not so likely to drown in fecal vomit; second, because the shock from the puncture is practically *nil*. In traumatic surgery of the lower extremities, spinal cocainization blocks the reflexes and eliminates, to a great extent, the risk of shock. In amputations above the hip, where shock from the operation is generally very severe, and often fatal, after cocainization of the cord, the amputation may be performed without any change in the pulse rate. In this class of operations, if, for good reason, unconsciousness is essential, as it sometimes is, a small amount of ether and chloroform may be administered to secure this end.

35. **Larvated Forms of Exophthalmic Goiter.**—Mettler emphasizes the fact that there are aborted, mild types of exophthalmic goiter; that they are not by any means uncommon; and that they are the most important cases for the physician's consideration from the standpoint of diagnosis, prognosis and treatment. Their diagnosis does not involve so much their mere differentiation from other diseases as it does the direct establishment of the existence of Grave's disease. This positive affirmation of the presence of this affection can not be made unless one or more of the cardinal symptoms—tachycardia, struma, exophthalmos and tremor—are present. Wanting all these, the diagnosis is worthless, no matter what other symptoms and complications may be present. Of the cardinal symptoms, the tachycardia, and of the minor or doubtful symptoms, those of a general neurasthenic nature, constitute the more familiar grouping in these important larvated types of exophthalmic goiter. Once the diagnosis is established in this type, the prime factors in the treatment of the case are absolute physical and mental rest and heightened nutrition.

38. **Surgical Treatment of Sciatica.**—The object of Barker's paper is to present a reasonable treatment for sciatica based on the etiology and pathology of the affection. The treatment is divided into two parts: (1) The dry or bloodless stretching of the nerve; (2) the introduction of normal salt solution between the nerve sheath and the nerve substance. The dry stretching, done by flexing the leg in extension on the abdomen, lessens the caliber of the nerve substance and thus relieves the pressure on it by a contracted sheath. To carry out the second part of the treatment, the nerve is exposed by an incision between the trochanter major and the tuberosity of the ischium. All the tissues are separated from the nerve, as far as possible, both longitudinal and laterally, but the nerve is not raised out of its bed and must not be on the stretch when the injection is made. As the salt solution is forced between the nerve sheath and nerve substance, the two are separated and the adhesions between them broken up. A common aspirator, with a barrel holding half an ounce, and having a needle about four inches long, is a satisfactory instrument with which to inject the salt solution. This process is repeated eight or ten times, changing the direction of the needle each time. The wound is closed, the patient put to bed, massage is practiced every day for ten days, and the patient made to use the limb from the first.

41. **Prison Tuberculosis.**—Tracy says that tuberculous patients must be isolated more particularly in prison than anywhere else. Convicts sentenced for only a short time enter these institutions, contract tuberculosis, serve their sentence, are discharged and roam about at large, spreading the disease, and die outside the prison walls. He urges the erection of proper sanitary cell-houses, and states that the prison physician should keep his patients in the open air as much as possible, and that when in the hospital he should isolate them. All tuberculosis patients should be clothed with flannels both winter and summer, and should receive a good nutritious diet with plenty of milk. For excessive coughing, he advises anodynes and good tonics.

American Journal of Surgery, New York.

April.

47 *X-Rays and Sterility. F. T. Brown and A. T. Osgood, New York.
48 *New Method of Performing Appendicectomy. C. W. Strobell, Rutland, Vt.
49 Paraffin in Surgery. A Critical and Clinical Study. (Continued.) W. H. Luckett and F. I. Horn, New York.
50 New X-Ray Tube Stand; A New X-Ray Table. W. M. Brickner, New York.
51 Chronic Constipation Due to Invagination of the Sigmoid into the Rectum and Its Surgical Treatment. S. G. Gant, New York.

52 Significance of Chronic Jaundice. C. A. Elsberg, New York.

May.

53 Gastroenterostomy. A. H. Ferguson.
54 Paraffin in Surgery. A Critical and Clinical Study. (Continued.) W. H. Luckett and F. I. Horn, New York.
55 Urethral Neoplasms. G. F. Lydston, Chicago.
56 Treatment of Acute Otitis Media in Childhood. P. Fridenberg.
57 Typhoid Ulcer—Its Surgical Aspect. T. B. Noble, Indianapolis.

47. **X-Rays and Sterility.**—Brown and Osgood urge *x*-ray workers to provide adequate protection for all parts of the body not directly exposed for examination or treatment, becaused repeated, prolonged exposures of the testes invariably produces sterility in the human being.

48. **New Appendicectomy.**—Strobell has devised a new operation which he believes will meet the requirements of more than 75 per cent. of the cases. The various steps of the operation are as follows: Tentatively, the muscle-splitting section, after McBurney, is always employed, the peritoneal opening not to exceed three-fourths of an inch, if possible. Through this small opening he introduces the beak of a short hysterectomy clamp, and grasps very gently a portion of the cecum and draws it upward through the opening, sufficiently far to seize it with fingers. The longitudinal band is readily found, and the appendix, if free, is easily brought through the opening. At no time should there be more than a square inch of intestine in sight. The appendix is now put on the stretch, and a longitudinal incision is made through the peritoneal coat, opposite the attachment of the mesentery, beginning at the base and terminating at the tip. This part of the operation is practically bloodless, as the incision traverses a "bloodless zone." Two Kelly's hemostatic forceps are now made to grasp the edges of the divided peritoneal coat, near the tip, while a third forceps grasps the head of the appendix and readily enucleates it from its bed, down to its base, with the aid of a scalpel or the gauze-covered finger. The next step is amputation of the appendix, one centimeter from the cecum. In doing this, Strobell proceeds to clamp just above the proposed line of amputation; while just below it he grasps the walls on the opposite sides with forceps. This insures control of the contents not only of the removed portion, but also of the stump, which is important in the subsequent steps. The appendix removed, he assures himself of the permeability of the lumen of the stump, cauterizes it with pure carbolic acid, and follows this with alcohol. The stump is now dilated, very gently, to its full extent. Next follows the most important part of this operation, the one on which Strobell bases his claim of originality. He introduces, through the canal of the stump into the lumen of the cecum, just at and parallel with the base of the stump, a small oval ring or band of metal (preferably of aluminum) of suitable size. The thumb and index finger are now made to compress the walls of the cecum, over the site of the ring, thus steadying it, while with a mosquito forceps the cut edges of the stump are inverted through the lumen of the ring, and into the cecum; firm compression of the ring is then made with the thumb and index finger, withdrawing meanwhile the inverting forceps. All that now remains to be done is to further compress the ring, which is accomplished with flat, smooth-faced compression forceps. No reinforcing stitches are necessary; the ring will hold the tissues without them. The cut edges of the peritoneal coat of the appendix are folded in upon themselves, and may thereafter be disregarded; nothing more is required but to drop the cecum back into the peritoneal cavity, after completing the toilet, and to close the abdominal incision. There are no sutures, no ligatures, no bleeding, no danger of secondary hemorrhage or of sepsis from possible infected suture or ligature material. The ring or band should be oval, not over one centimeter in its longitudinal diameter. It may be of any metal, but the ductility and lightness of aluminum makes it especially adaptable. The inside of the ring should be roughened with a graver, in one direction, to facilitate the withdrawal of the inverting forceps. The ring falls off and makes its exit from the bowels in about one week.

Virginia Medical Semi-Monthly, Richmond.

May 12.

58 Psychological Incident in the Court Room. T. D. Crothers, Hartford.
59 Abscess of the Lung—Operation, with Recovery. W. D. Travis, Covington, Ga.
60 Pernicious Malarial Fever, with Special Reference to the Hemorrhagic Types. Report of Cases. W. L. Crosthwait, Holland, Texas.
61 *Nephrectomy Performed for Gunshot Wound. J. McFadden Scott, Atlanta, Ga.
62 *Excision of the Urinary Bladder. G. T. Vaughan, Washington, D. C.
63 Typhoid Fever. F. M. Brantley, Senoia, Ga.
64 Principles of Surgery. S. McGuire, Richmond.

61. **Nephrectomy for Gunshot Wound.**—Gaston's patient was shot in the left ninth interspace in the mid-axillary line, the bullet ranging down toward the crest of the ilium. The kidney was considered to be wounded, because of the direction of the bullet and the bloody condition of the urine. The kidney was removed, but the ureter was left loose, in the care of nature; the kidney space was packed thoroughly with iodoform gauze. The patient made an uneventful recovery.

62. **Excision of Urinary Bladder.**—In the case reported by Vaughan, a case of sarcoma of the vesical trigone, in a man, aged 32, the rectum was packed with gauze, a curved incision was made across the perineum, the bladder and prostate were dissected from the rectum and the space packed with gauze. The abdomen was then opened through the left rectus muscle, and by an incision at right angles along the pubes, chiseling off the bony attachment of the recti-muscles. The urethra was then divided in front of the prostate gland and the bladder separated from its attachments as far as the ureters. The peritoneum was split over the ureters and the bladder lifted up and opened, in order to see about removing the segment containing the mouths of the ureters, but as the disease involved the entire bladder this could not be done. The right ureter was completely occluded with two or three small calculi near its mouth, and was dilated to the size of one's finger with dark bloody urine. The ureters were cut off near the bladder and implanted separately into the sigmoid flexure by means of fine silk sutures. The patient died at the close of the operation from exhaustion.

Quarterly Journal of Inebriety, Hartford, Conn.

April.

65 *Study of the Effects of Alcohol on School Children. T. A. MacNicholl, New York City.
66 Contribution to the Study of Narcosomania. T. H. Evans, Philadelphia.
67 Treatment of the Morphin Habit. C. Pope, Louisville, Ky.
68 Things That Make Inebriates. D. Paulson, Hinsdale (Ill.) Sanitarium.

65. **Effect of Alcohol on School Children.**—In the course of a study of the relation of heredity to the mental deficiency of children, MacNicholl examined 55,000 school children, 10,800 from country schools and 44,200 from city schools. The 55,000 children, classified according to their standing in studies, appear as follows: Standard, 42 per cent.; below standard, 16 per cent.; dullards, 17 per cent.; very deficient, 25 per cent. Direct causes of dullness reported: Personal habits, 9 per cent.; environment, 11 per cent.; heredity, 65 per cent.; sickness, less than .03 of 1 per cent. Comparing city and country schools we find a preponderance of deficients in the city. Country schools: Dullards, 15 per cent.; very deficient, 7 per cent—a total of deficients in country schools of 22 per cent. City schools: Dullards, 17 per cent. plus; very deficient, 29 per cent. plus—a total of deficients in city schools of 46 per cent. The personal attitude to alcoholic drinks, including beer, wine and spirits, is reported in 34,000 cases, viz.: Abstainers, 73 per cent.; drinkers of beer, 23 per cent.; drinkers of spirits, including wines, 4 per cent.; drinkers of beer and spirits, 12 per cent. The parental attitude to alcoholic drinks is reported in 20,147 cases: Children of drinking parents. 6,624; children of abstaining parents, 13,523; children of drinking parents reported dullards, 53 per cent.; children of abstaining parents reported dullards, 10 per cent. The following is a summary of the family histories of 3,711 children of 1,100 different families traced through three generations: 1,871 males, 1,840 females; 19 precocious in one or more studies, 421 excellent. 981 fair, 2,290 dullards. The personal attitude to drink: 66

per cent. abstainers, 28 per cent. beer drinkers, 6 per cent whisky drinkers, 14 per cent beer and spirits drinkers. Family history in relation to drink: 2,713 had drinking parents, 2,771 had drinking grandparents, 2,530 had drinking parents and grandparents, 998 had abstaining parents, 757 had abstaining parents and grandparents. Of the children of drinking parents but abstaining grandparents, 73 per cent. were dullards, of the children of abstaining parents but drinking grandparents, 78 per cent. were dullards; of the children of abstaining parents and abstaining grandparents, 4 per cent. were dullards Dividing the 3,711 children into two classes, viz., those free from hereditary alcoholic taint and those with hereditary alcoholic taint, some very striking contrasts may be noted. 1. Of those free from hereditary alcoholic taint, 96 per cent were proficient, 4 per cent. were dullards, 18 per cent. suffered from some neurosis or organic disease. 2 Of those with hereditary alcoholic taint, 23 per cent were proficient, 77 per cent. were dullards, 30 per cent. very deficient, 76 per cent. suffered from some neurosis or organic disease. From these studies, MacNicholl concludes: First, alcohol at the threshold of life is a bar to success and a foe to health, second, alcohol, by destroying the integrity of nerve structures and by lowering the standard of organic relations, launches hereditary influences which by *continuous transmission* gain momentum and potency and leave their impact on gland and nerve until the mental faculties are demoralized, physical energies hopelessly impaired and the moral nature becomes degenerate and dies, third, if we are to make any material change in the ranks of mental deficients, we must adopt methods of prevention as well as methods of cure

Journal of the Kansas Medical Society, Kansas City, Kan.

May.

69 Business Side of Professional Life L Reynolds, Horton, Kan

Detroit Medical Journal.

May

70 Sanitation on the Isthmus of Panama W C Gorgas
71 Borderline Between Ophthalmology and General Medicine K K Wheelock, Ft Wayne, Ind
72 Nose and Throat Work for the General Practitioner B R Shurly, Detroit
73 Points on Retention of Urine W A Hackett, Detroit
74 Should We Have County Health Officers? F E Kitzmiller, Piqua, Ohio

The Medical Herald, St. Joseph, Mo.

May

75 Surgical Versus X-Ray Treatment of Rodent Ulcers and Epitheliomata of the Face, with Report of Operated Cases C O Thienhaus, Milwaukee
76 Points on Suprapubic Cystotomy E N Wright, Olney, I T
77 Injuries to the Spinal Column C. E Black, Jacksonville, Ill
78 Medical and Office Treatment of Gynecologic Patients E Brown, Omaha, Neb
79 Skin Therapy L H Warner, New York

Northwestern Lancet, Minneapolis.

May 15

80 Mortality, Disability and Permanency of Cure in Surgery C H Mayo, Rochester, N Y
81 General Considerations in the Treatment of the Earlier Stages of Pulmonary Tuberculosis L A Nippert, Minneapolis
82 Importance of Nasal Breathing in Exercise W N Porteous, Minneapolis

Medicine, Detroit, Mich.

May

83 History of Panama and the Panama Canal S Egbert, Philadelphia
84 The Isthmian Canal Zone J McFarland, Philadelphia
85 Medical Conditions of the Isthmus of Panama, with Other Notes R G Curtin
86 How Can the Physician Profit by Preventive Medicine? J M Taylor
87 Accouchement Forcé G M Boyd Philadelphia
88 Civil Malpractice G J Tobias Chicago
89 Orbital Tumor of Ten Years' Standing C A Leenheer

Southern California Practitioner, Los Angeles.

May

90 Flies as Carriers of Disease J O Cobb, Los Angeles
91 History of Medicine J P Widney Los Angeles
92 Physical Inspection of Children—Tests G L Leslie, Los Angeles

Alienist and Neurologist, St. Louis, Mo.

May

93 Status of Insane Homicides Under Illinois Law J G Kiernan, Chicago
94 Some Observations on Dementia Precox (Adolescent Insanity) D R Brower, Chicago
95 Outlines of Psychiatry in Clinical Lectures C Wernicke, Breslau
96 Mixoscopic Adolescent Survivals in Art, Literature and Pseudo Ethics (To be continued) J. G. Kiernan, Chicago.
98 Panama Pan-American Medical Congress C H Hughes, St. Louis

Wisconsin Medical Journal, Milwaukee.

May

99 Stokes-Adams Disease C. H. Stoddard, Milwaukee.
100 Radical Treatment of Cancer of the Stomach. Report of Cases H Reineking, Milwaukee
101 Important Point in Our Warfare Against Tuberculosis. W. B Hopkins, Cumberland, Wis
102 Cryptorchism. P H. Jobse, Milwaukee
103 Complications of Labor at Term O. T. Woolheiser, South Wayne, Wis

Columbus Medical Journal.

May

104 Traumatic Neurosis H C. Rutter, Columbus
105 Intermittent Claudication G F. Zinninger, Canton
106 Case of Tonsillar Tuberculosis. C. S Means

Chicago Medical Recorder.

May 15

107 Gastroenterostomy W H Wathen
108 Cholecystotomy and Cholecystectomy A. C. Wiener, Chicago
109 General Anesthetics, Ether and Chloroform H D. Peterson, Chicago
110 Impotence and Sterility F. A. Leusman, Chicago

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.

May 13

1 *Logical Basis of the Sanitary Policy of Mosquito Reduction R. Ross, *Liverpool.*
2 *Cause and Treatment of Pruritus Ani. F. C. Wallis, London
3 Surgical Anatomy and Operative Treatment of Tuberculous Glands of Neck W G Sutcliffe, Margate
4 Congenital Hypertrophy and Dilatation of the Sigmoid Flexure W. F. Brook, Swansea
5 *After History of Patients on Whom Gastric Operations Have Been Performed C. M. Moullin, London
6 Value of the Vermiform Appendix in the Treatment of Ulcerative and Membranous Colitis J Hutchinson, Jr, London

1 **Sanitary Policy of Mosquito Reduction**—The whole subject of mosquito reduction, says Ross, can not be scientifically considered without mathematical analysis He believes that the effect of anti propagation measures must always be a reduction of the mosquito density, not only within the area of operation, but to a distance equal to the ideal limit of migration beyond it. On the boundary of operations the mosquito density should always be reduced to about one half the normal density, while the curve of density will rise rapidly outside the boundary and will fall rapidly inside it. As immigration into an area of operations must always be at the expense of the mosquito population immediately outside it, the average density of the whole area affected by the operations must be the same as if no immigration had taken place As a general rule, for practical purposes, if the area of operations be of any considerable size, immigration will not very materially affect the result.

2 **Treatment of Pruritus Ani**—In over 90 per cent. of cases of pruritus ani examined Wallace found a shallow ulcer situated between the two sphincters. more often in the posterior segment than in the anterior and generally near the dorsal midline As this was a definite and constant lesion, he determined to treat it, believing it to be the cause of the trouble The usual preparation for a rectal operation having been carried out. the patient is anesthetized and put in the lithotomy position The sphincter is moderately stretched, and the ulcer or ulcers are brought into view and treated with the electric thermocautery. The cautery is also applied to the thickened skin, especially in any cases in which fissures or clefts exist between the hypertrophied skin folds Vaselin is applied to the cauterized area. and a morphin suppository is inserted into the bowel. A pad of wool is kept in position by a T-bandage, and the patient is put back to bed and kept there A purge is given on the third night, and a warm boracic bath is taken twice a day. After the bath the skin is thoroughly dried and powdered with starch and zinc powder, and a small piece of cotton wool, impregnated with powder, is introduced just inside the sphincter. In all these cases the irritation ceases either at once or after a few days, and, if

the nail, a perfect cure for [illegible] argument in favor of prompt toxicity of the alum, its easy application [illegible]ncy. It is impos- render it the chosen treatment for cases in[illegible]ant or not, and intervention is not contemplated. He describ[illegible] of adhesions cases and contrasts them with another series [illegible] discovered other caustics with far less favorable and durable [illegible]ults. He applies a fomentation of soap and water for 24 hours beforehand and then pours the alum into the space between the nail and its bed, tamponing with cotton to keep the alum in place, and repeating the application daily. The suppuration rapidly dries up and pain and discomfort are relieved almost at once.

Revista de Medicina y Cirugia, Havana.

Last indexed pages 168 and 432.

112 (IX, No. 6.) Del tratamiento de las uretritis cronicas. R. Menocal.
113 (No. 7.) Consideraciones sobre la relacion fisiologica de los normoblastos con el higado y el bazo (with liver and spleen). J. F. Arteaga.
114 Medical Examination of Criminals; Prison Physicians.—El examen medico de los detenidos y los medicos de las prisiones. R. P. Vento.
115 (No. 8.) The Sechium Edulis as a Desirable Culture Medium.—El chayote como medio de cultivo en bacteriologia. E. Cuervo.
116 (No. 9.) Signos clinos que autorizan la nefrectomia. M. V. Bango.
117 (No. 10.) Via *transpleural para las intervenciones* del bazo (transpleural route for access to spleen). F. Dominguez.
118 (No. 11.) Puericultura. G. Arostegui.
119 Frogs as Food.—Las ranas como alimento. L. M. Cowley.
120 (No. 12.) La terapeutica de la sifilis. M. Duque.
121 Contribucion al diagnostico del carbunclo bacteridiano y del edema maligno. E. Cuervo.
122 (Nos. 13-15.) Creches.—Asilos cunas. L. M. Cowley.
123 Anatomia topografica de la region ceco-apendicular. J. F. de Poo.
124 Id. del duodeno. J. A. Taboadela.
125 Id. del estomago (stomach). G. Pedroso.
126 (No. 15.) Influence of Hysteropexy on Succeeding Pregnancies.—Influencia de la histeropexia *sobre* la *evolucion* y terminacion de los embarazos consecutivos. E. Nunez.
127 Sobre infecciones piohemicas. M. G. Lebredo.

Siglo Medico, Madrid.

128 (LII, No. 2,665, January 7.) *El tratamiento de la pustula maligna. D. J. G. Castro.
129 (No. 2,666.) El infantilismo en las enfermedades de la trompa (in affections of Fallopian tube). P. Martin. (Commenced in preceding number.)
130 (No. 2,668.) *Serotherapy in Treatment of Ulceration of the Cornea.—La sueroterapia como tratamiento de las ulceras supurativas de la cornea. B. Castresana. (Commenced in No. 2,667.)
131 Cold and the Tubercle Bacillus.—El frio y el bacilo tuberculoso. A. Correa.
132 (No. 2,669.) *Sphenoid Excision in Gasserectomy.—Escision esfenoidal de dentro afuera en la extirpacion del ganglio de gaserio. A. San Martin.
133 (No. 2,670.) Hydatid Cysts of Orbit.—Quistes hidatidicos de la orbita. R. D. Quartiellers.
134 (No. 2,670.) Public Health in Spain.—De la sanidad publica en Espana. M. L. Comas.
135 (No. 2,671.) Incision trilineal y resection romboidea en la toracoplastia. Algunos casos raros de cirugia toracica. A. San Martin.
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787920 Medical apparatus. Frederick Hofmann, New York.
788362 Anatomic[illegible] recording machine, Henry C. Lavery, [illegible]
788059 Syringe, [illegible] Cambridge, Mass.
788277 Operating table or similar structure, George L. Poll, *New York*.
788073 Surgical pad, Henry O. Sommer, Washington, D. C.
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788757 *Atomizer*, Hiram C. J. Decks, Paterson, N. J.
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790051 Breast-pump, Hubert H. Halstead, Poughkeepsie, N. Y.
790057 Respirator or inhaler, John L. Hively, Elkhart, Ind.
789733 Truss, Wm. S. Hobson, Aberdeen, Miss.
789915 Determining degree of deafness, Miller R. Hutchison, New York.
789876 [illegible] earpiece, Herman G. Pape, New York.
790234 [illegible]. Abraham R. Waldo, Eaton, Colo.
790241 Antisep[illegible] for telephones or the like, Walter Wright, San Francisco.

LITERATURE.

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Original Articles

THE TREATMENT OF PULMONARY TUBERCULOSIS.*

GEORGE WILLIAM NORRIS, A.B., M.D.

Fellow of the College of Physicians of Philadelphia, Assistant Visiting Physician to the Philadelphia General Hospital, Physician to the Dispensary of the Episcopal Hospital and the Phipps Institute, Medical Examiner to the White Haven Sanatorium.

PHILADELPHIA.

It would be entirely impossible in the short space allotted to cover comprehensively the entire treatment of a disease on which volumes have been written. I shall therefore not even endeavor to mention a large number of means and measures of undoubted utility which in the hands of various practitioners have proved of unquestionable benefit; but shall confine my remarks to a single method which has successfully stood the test of trial. I shall try to point out a series of simple and practical procedures such as are available in any climate or locality, attempting at the same time to lay emphasis on certain simple details, the oversight of which has often proved the stumbling block of the general practitioner, and I shall of necessity be forced to pass perfunctorily over certain subjects, in order to be sufficiently brief.

The only treatment which has satisfactorily stood the test of time and of investigation, is that which with various modifications, is now in vogue in the various sanatoria throughout the world. The underlying basis of the treatment in all of these institutions is: first, a constant and unlimited amount of fresh air and sunlight; second, the proper quantity and quality of food, taken at the right time; third, a regulation of the expenditure of bodily energy; anabolism and katabolism being so regulated that the balance sheet shall always show a credit in favor of the former.

The successful treatment of pulmonary tuberculosis, perhaps more than any other disease, depends on a relentless attention to detail. Of the greatest importance also is an early diagnosis. This means a diagnosis of the condition at a time when no more than slight infiltration of the lungs has taken place. I would not be understood as saying that patients with cavities can not be cured, for such cure is a matter of every-day occurrence, but the length of time required for recovery corresponds more or less to the length of time the disease has run. If we wait for the appearance of tubercle bacilli in the sputum in every case before making a diagnosis, many a patient's life will be sacrificed which might have been saved if he had been given the benefit of the doubt, and if treatment had been inaugurated at an earlier moment.

Except in hopeless cases, as soon as the diagnosis is established, the patient should be told of his condition in unequivocal terms; the general source and character of the disease should be explained, and a favorable prognosis given, provided that the proper treatment is promptly instituted and carried out for a sufficiently prolonged period. At the same time, the danger of infection, both to himself and to others, should be fully impressed on the patient, who should be warned against swallowing his own expectoration, and instructed in a method of hygienically disposing of it. He should never be allowed to leave the office with any such ambiguous phrases as "lung trouble," "weak lungs," "spot on the lung," running through his mind. This is necessary, not only in justice to the patient himself, but because it is impossible to make him carry out the treatment with the rigor, or for the length of time required for a cure, or even for an arrest of the disease. so long as he considers himself merely the victim of a protracted cold.

He must be made to understand from the very outset. that a disease which has existed for months or years can not be cured in a number of weeks, and that, in order to recover, it will be necessary for him to make it his business to get well, a duty to which all his pleasures and all but the barest necessities must be temporarily sacrificed; also that the success of the treatment will be proportional to the exactness with which he carries out the instructions of his medical adviser. He must be taught—and this is often a difficult matter at first—that the old ideas as to the baneful effects of exposure to the out-of-door air on raw, cold, damp or stormy days or nights, also bathing, etc., are fallacious; and that if properly but not too warmly clothed he may go out, and must if within doors keep the windows constantly open. As to catching "fresh cold," it should be explicitly stated that it is not the exposure to inclement weather which is to be avoided, but the association with individuals who are affected with "colds," tonsillitis, etc., as these maladies are distinctly contagious. It must also be clearly

the patient and the physician that the former must absolutely forswear the taking of any remedies not prescribed by the latter. Failure on the part of the patient to respond to treatment is often due to the fact that various patent medicines, cough mixtures, consumption cures, etc., which have been recommended by solicitous friends, are surreptitiously taken by the patient. These remedies usually contain large quantities of narcotics or stimulants, such as opium, cocain, alcohol and other medicaments which should rarely if ever be prescribed for a case of pulmonary tuberculosis.

Before attempting to lay out any line of treatment, the physician, by careful questioning, should make himself acquainted with every phase of the patient's daily the nail, a perfect cure for her argument in favor of prompt toxicity of the alum, its easy application ncy. It is impos- render it the chosen treatment for cases in ant or not, and intervention is not contemplated. He describ of adhesions cases and contrasts them with another series t discovered other caustics with far less favorable and durable the ults. He applies a fomentation of soap and water for 24 hours beforehand and then pours the alum into the space between the nail and its bed, tamponing with cotton to keep the alum in place, and repeating the application daily. The suppuration rapidly dries up and pain and discomfort are relieved almost at once.

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* Read before the Harrisburg Academy of Medicine, 1905.

Revista de Medicina y Cirugia, Havana.

Last indexed pages 168 and 432.

112 (IX, No. 6.) Del tratamiento de las uretritis cronicas. R. Menocal.
113 (No. 7.) Consideraciones sobre la relacion fisiologica de los normoblastos con el higado y el bazo (with liver and spleen). J. F. Arteaga.
114 Medical Examination of Criminals; Prison Physicians.—El examen medico de los detenidos y los medicos de las prisiones. R. P. Vento.
115 (No. 8.) The Sechium Edulis as a Desirable Culture Medium.—El chayote como medio de cultivo en bacteriologia. E. Cuervo.
116 (No. 9.) Signos clinos que autorizan la nefrectomia. M. V. Bango.
117 (No. 10.) Via transpleural para las intervenciones del bazo (transpleural route for access to spleen). F. Dominguez.
118 (No. 11.) Puericultura. G. Arostegui.
119 Frogs as Food.—Las ranas como alimento. L. M. Cowley.
120 (No. 12.) La terapeutica de la sifilis. M. Duque.
121 Contribucion al diagnostico del carbunclo bacteridiano y del edema maligno. E. Cuervo.
122 (Nos. 13-15.) Creches.—Asilos cunas. L. M. Cowley.
123 Anatomia topografica de la region ceco-apendicular. J. F. de Poo.
124 Id. del duodeno. J. A. Taboadela.
125 Id. del estomago (stomach). G. Pedroso.
126 (No. 15.) Influence of Hysteropexy on Succeeding Pregnancies.—Influencia de la histeropexia sobre la evolucion y terminacion de los embarazos consecutivos. E. Nunez.
127 Sobre infecciones piohemicas. M. G. Lebredo.

Siglo Medico, Madrid.

128 (LII, No. 2,665, January 7.) *El tratamiento de la pustula maligna. D. J. G. Castro.
129 (No. 2,666.) El infantilismo en las enfermedades de la trompa (in affections of Fallopian tube). P. Martin. (Commenced in preceding number.)
130 (No. 2,668.) *Serotherapy in Treatment of Ulceration of the Cornea.—La sueroterapia como tratamiento de las ulceras supurativas de la cornea. B. Castresana. (Commenced in No. 2,667.)
131 Cold and the Tubercle Bacillus.—El frio y el bacilo tuberculoso. A. Correa.
132 (No. 2,669.) *Sphenoid Excision in Gasserectomy.—Escision esfenoidal de dentro afuera en la extirpacion del ganglio de gaserio. A. San Martin.
133 (No. 2,670.) Hydatid Cysts of Orbit.—Quistes hidatidicos de la orbita. R. D. Quartiellers.
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789876	Sound-dissipating earpiece, Herman G. Pape, New
790234	Surgical instrument, Abraham R. Waldo, Eaton,
790241	Antiseptic mouthpiece for telephones or the like. Wright, San Francisco.

in the course of 24 hours, which helps to restore vasomotor tonicity.

HEMOPTYSIS.

Hemoptysis calls for rest in bed, for at least ten days. An ice bag should be placed on the chest, nitroglycerin gr. 1/100 administered every three hours, laxatives prescribed, and the patient warned against exertion, excitement, and all loud talking or unnecessary coughing. Anxiety on the part of the patient should be allayed by a hypodermic injection of morphin, and the assurance that hemorrhages are rarely fatal, and that a few days' rest and good feeding will easily compensate for the amount of blood lost.

PAIN.

Pain due to pleuritis may be relieved by strapping the chest, tincture of iodin, blisters, dry cupping, or application of an ice bag, or a mustard plaster. The vague aches and pains which are so frequent, and which have been called tuberculous rheumatism should be treated by attention to the emunctories, the local application of heat, warm baths, and massage. For the latter purpose, almost any of the official liniments may be employed. A preparation which has been found very efficacious is as follows:

R.	Iodi cryst	gr. xxx	2
	Lanolini	℥iss	45
	Olei gossypii ad	℥iii	90
	Etheris q. s.		

Internally administered, sodium salicylate is sometimes of benefit.

INSOMNIA.

As has already been intimated, much can be accomplished in the treatment of this symptom by suggestion. A heavy meal in the evening should be avoided. A glass of hot milk or cocoa, or a mustard foot bath may be taken just before retiring. If the insomnia is due to cough, the patient should be instructed to suppress the latter as much as possible. Hyperirritability of the pharynx or larynx should be treated. If insomnia is due to tachycardia, an ice bag to the precordium will be found useful.*

Under the beneficent influence of fresh air this symptom can usually be overcome without great trouble. Only after all other measures have failed should recourse be had to sedatives or hypnotics, and as can not be too forcibly insisted on, no form of opium should be administered as long as a chance of recovery is entertained.

One of the most fruitful sources of insomnia during the winter months is coldness of the extremities. This may be overcome by hot foot baths, or by placing hot bricks in the bed. The patient in such cases should sleep in woolen stockings, and it is not a bad plan to have woolen pajamas worn, which have stockings attached.

HEART WEAKNESS.

Cardiac weakness as manifested by tachycardia, palpitation on exertion, a sense of weakness, edema or vertigo, should be treated by absolute rest in bed, the avoidance of mental excitement, or worry, and application of an ice bag to the precordium. Heart weakness is a serious sign, which should receive prompt and careful treatment. Patients who present persistent and intractable rapidity of the pulse are apt to do badly even though the amount of lung tissue involved may be slight. As internal remedies, digitalis and strophanthus are signal failures, and reliance will usually have to be placed on glonoin, camphor, and strychnin.

I have made no mention of specific treatment by means of the various serums and culture products which are now in use, because, while these methods may be, and probably are, of benefit in the treatment of tuberculosis, they must still be considered in the nature of adjuncts, and not of essentials.

There is nothing original or new in the methods which I have advocated. The whole matter is so simple that it seems hardly worth while calling attention to it, but the entire success of the treatment is proportional and dependent on the exact and careful manner in which apparently insignificant details are investigated and carried out. The main reasons why such an air of incredulous skepticism and prognostic gloom pervades the subject of pulmonary tuberculosis in the mind of the average practitioner are two: First, the disease is not recognized in its incipient stage; second, owing to lack of conviction, on the part of the physician, and to insufficient understanding and impression on the part of the patient, the simple details of the essentials—fresh air, diet, and hygiene—are not properly carried out.

A tuberculous patient who has lost weight, when put under the proper treatment, should promptly and steadily respond. This response will be manifested by a gain in weight, gradual subsidence of the fever, cough, expectoration, malaise, and in time, by the disappearance of the tubercle bacilli from the sputum, unless the case be too far advanced. If distinct improvement does not occur something is wrong—there is a mistake somewhere, and it is the duty of the physician, by careful questioning, by relentless examination, and by exhaustive collateral investigation among the patient's family or friends, to ascertain the cause.

It will usually be found that the patient in some respect or another is not carrying out his treatment. He is exhausting his strength by exercise or overwork, by not taking his food as prescribed, the windows of his room are only down half an inch at the top, instead of all the way, he is surreptitiously taking alcohol or some patent nostrum recommended by a friend, or he is in some respect deceiving himself and his physician, and infringing the rules laid down by the latter, and until these irregularities are discovered and corrected no satisfactory progress will be made.

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*For a more comprehensive consideration of tachycardia in pulmonary tuberculosis the reader is referred to an article by the author in the Zeitschrift fur Tuberculose und Heilstaettenwesen, 1905.

CASE OF EXOPHTHALMIC GOITER WITH UNUSUAL ASSOCIATED LESIONS.

DISCUSSION OF THE CLINICAL PROBLEM SUGGESTED THEREBY.*

ARTHUR R. ELLIOTT, M.D.
CHICAGO.

Patient.—W. M., aged 54, American of Scotch parentage; occupation, foreman of public works. Family history negative.

History.—Patient is over six feet in height, is of unusual intelligence and displays evidence of having possessed great muscular development when in his prime. He declares that his use of alcohol and tobacco has always been extremely moderate and there is no history of venereal infection. He confesses that he has always been a very nervous man and that, despite his efforts at control, his temper has been a quick and unruly one. Mumps, measles and "grippe" are the only illnesses in his personal history, with the exception of an ephemeral attack occurring a year ago designated by his medical attendant "muscular rheumatism."

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* Read before the Chicago Medical Society, 1905.

Present Illness.—Five years ago the patient first observed a swelling of the neck, which has persisted in the form of a moderate sized goiter ever since that time. Close questioning elicits the general statement that he was very nervous, had considerable palpitation and began gradually to lose weight about the time of the appearance of the goiter. Shortly afterward he observed transient swelling of the hands and feet on exposure to cold. He states that about the same period he noticed that the urine became increased in quantity and he began to experience the necessity of rising each night to void urine, a practice which has continued ever since. He denies that there existed at that time or subsequently any undue prominence of the eyeballs. About one year ago he suffered a severe attack of urticaria, ascribed at the time to food poisoning. The patient was first seen by me in August, 1903. The emaciation, which has been gradual and continuous since the development of the goiter, has reduced the body weight from [illegible]0 pounds to 160 pounds. For some months he has noticed that the appetite is unnaturally voracious and that he suffers considerably from thirst, the urine being correspondingly copious. There have been no boils or skin eruptions other than the urticaria already referred to. The following clinical notes were taken at this time.

There is noticeable a high degree of general nervousness and the patient is easily excited. The skin is dusky, although not pigmented, and is constantly covered with an oily warm perspiration. There is present fine tremor of the hands when the arms are extended. The face is covered with a fine network of dilated capillaries, most pronounced at the nasal alæ and over the malar prominences, which gives to the face a dusky bronzed look. The anterior temporal arteries are dilated and tortuous and can be seen to pulsate strongly. A decided bagging under the eyes is noticeable, and the conjunctivæ are injected. The pupils are regular in size and react normally to light and accommodation, and both hearing and sight are good, except for the usual presbyopia to be expected at his age. A moderate sized right goiter exists, as already stated. The pulse is rapid, counting 126 at the wrist, irregular both in rhythm and volume, the pulse wave being abrupt and large, but not sustained. The vessels are markedly sclerosed, but do not give to the examining finger the impression of tension. There is excessive pulsation of the prominent systemic arteries, particularly the carotids and brachials. On flexure of the forearm the brachial artery is thrown into vermicular folds and is seen to pulsate strongly with a lateral movement of the vessel. The patient is dyspneic and states that for some time he has experienced "short breath" on exertion and nervous strain. At such times he feels a sense of poststernal weight and oppression, but has never had any pains in the chest. There is marked pretibial pitting, the edema not extending above the knees, and there is no ascites. At this time the patient has no idea of his physical condition, except a vague impression that something is the matter with his heart.

Physical Examination.—Patient shows some evidence of emaciation. The skin is oily, moist with perspiration, and there is a small papular eruption on the chest and back, while many moles exist.

Heart: On inspection an excessive diffuse precordial heave is observed; viewed in profile, the left anterior chest curve is more prominent than the right. The apex can be readily seen in the fifth interspace and displaced fully one inch to the left of the nipple line. Excessive carotid pulsation and suprasternal and epigastric pulsation exist. On palpation a soft presystolic thrill running up to the apex can be felt. The area of superficial cardiac dullness measures 16.5 centimeters at the level of the fourth rib, 10 centimeters to the left and 6.5 centimeters to the right of the midsternum. In the fifth interspace the left border reaches 13 centimeters to the left of the median line. A blowing systolic murmur is audible in the mitral area, with its point of greatest intensity at the apex. This murmur almost entirely substitutes the first sound of the heart at the apex and is transmitted toward the axilla, but is not audible under the scapula behind. A second murmur, harsher in quality and presystolic in time, is audible over a comparatively limited area to the right of and above the apex. The second pulmonic sound is markedly accentuated, as is also the second aortic, although to a less extent.

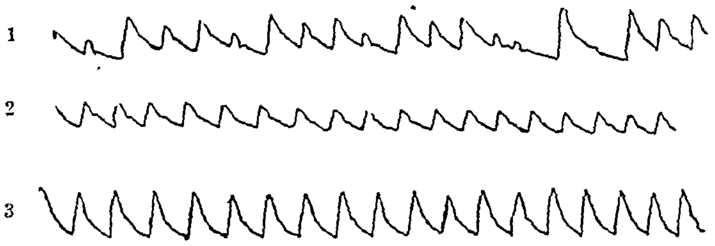
Abdomen: Abdominal examination is negative, except that the liver is enlarged two finger breadths and somewhat tender to pressure over the left lobe.

Blood vessels: The systemic arteries are sclerosed and the pulse wave is excessive all over the arterial tree. The pulse is very irregular both in rhythm and quality. Many cardiac systoles are abortive, some not being perceptible at the wrist. The sphygmogram displays little of the wave of tension that might with reason be expected in view of the arteriosclerosis and the following urinary findings. Blood pressure equals 130 mm. of mercury (Riva Rocca, 9 cm.)

Urine: Urine analysis reveals 3 per cent. of sugar, 8 per cent. bulk of albumin precipitate estimated by centrifuge, 1 per cent. urea, and under the microscope many casts and renal epithelia. The casts are mainly broad hyaline, with some granular and a few waxy casts. Acetone and diacetic acid absent. No anemia is present. The patellar reflexes are markedly accentuated.

Eyes: A careful examination of the eyes made a short time after first consultation, with the expert assistance of Dr George F. Suker, yielded the following results:

There is no constriction in the field of vision of either eye. There is no visible protrusion of the eyeball and the exophthalmic symptoms of von Graefe, Stellwag and Moebius are absent. Ophthalmoscopic examination reveals the presence of typical hemorrhagic retinitis in both fundi. Multiple pinpoint hemorrhages are found distributed over the retinæ of both eyes, particularly to the nasal side of discs, some being quite peripheral. A large flame-shaped hemorrhage exists in the upper temporal quadrant of retina between the disc and macula in the right eye. The retinæ and choroids of both eyes, as a whole, look somewhat suffused, but otherwise no degenerative changes are present. Discs are clearly outlined and apparently normal. The retinal vessels, especially the veins, are tortuous and a marked venous pulsation is noticeable. The peripheral light striæ on the arteries are prominent and enlarged, due to the arteriosclerosis. Repeated fundus examinations have been made in the intervening months since the above findings were recorded, and we have been able to follow closely the progress of degenerative changes which are typically those of albuminuric retinitis. On March 8, 1904, the date of last recorded ophthalmoscopic examination, many well-formed areas of degeneration could be seen. The larger areas were confined to the circum-macular region, the smaller ones to the periphery of the retinæ. There were several fresh hemorrhages in each retina. Vision is not altered and there is no change in the visual fields.



Pulse tracings taken Sept. 4, 1903, Feb. 15, 1904, and March 4, 1904, respectively.

Influence of Treatment.—Treatment consisted of general hygiene, dietetic procedure and the routine administration of digitalis.

(*a*) Influence of diet on the glycosuria: The patient was at first placed on a diet of meat, fats, green vegetables, acid fruits, 100 grams of plain white bread and 50 grams of potato to be taken at the midday meal, the bread to be equally divided between the three daily meals. At the expiration of the first week of treatment, the glycosuria had become reduced from

3 per cent. to 2 per cent. Two weeks later (Sept. 21, 1903), without further restriction of carbohydrate foods, the glycosuria had subsided to 0.4 per cent. October 22 the glycosuria amounted to 0.6 per cent. The allowance of starch was now increased in the interests of the patient's general nutrition, the daily ration of bread being raised to 200 grams. The increase of carbohydrate was attended by a marked rise in the glycosuria, the urine showing on October 20 a sugar content of 1.7 per cent. and on November 20 the same amount. The patient's condition in other respects being now much improved, he was directed to gradually return to the former dietary. The subsequent course of the glycosuria was as follows:

December 3, 1903, glycosuria	1.3 per cent.
December 21, 1903, glycosuria	1.0 per cent.
March 5, 1904, glycosuria	1.0 per cent.
March 25, 1904, glycosuria	0.8 per cent.
May 2, 1904, glycosuria	0.7 per cent.

With control of the glycosuria, the diabetic symptoms (polyuria, polyphagia, polydipsia, etc.) have gradually disappeared.

(*b*) Influence of digitalis on the heart and albuminuria: Tincture of digitalis was ordered in 15-drop doses every eight hours. One week after the institution of this medication the patient's cardiac condition remained practically unchanged, the albuminuria having undergone no diminution (8 per cent.) Two weeks later (Sept. 21, 1903) patient was still dyspneic and edematous, the pulse irregular, and the albuminuria had increased to 15 per cent. bulk of moist coagulum. An additional dose of digitalis was now ordered, the total dosage being 60 minims of the tincture in the twenty-four hours.

Result.—Steady improvement now set in, and by October 22 cardiac regularity had become almost completely restored. Edema was greatly lessened, the albuminuria subsiding to 2.5 per cent., casts persisting and urea 0.7 per cent. Since that date the progress of the case has been marked by steady improvement. Digitalis administration was continued, although in reduced amount, the routine dosage being 15 minims twice daily. The patient's general strength has been greatly benefited, although no gain in body weight is recorded; dyspnea has disappeared except on sharp exertion, and but slight evening malleolar edema can be detected. Albuminuria persists at 2 per cent. bulk, not having been at any time reduced below that point.

Analysis: May 2, 1904: Total quantity, 1,000 c.c.; albumin, 2 per cent.; urea, 23 grams; sugar, 0.7 per cent. (total, 7 grams); casts and renal cells.

An interesting feature of the case is that despite the restoration of compensation and the disappearance of cardiac irregularity, digitalis medication failed to reduce the pulse rate. The pulse has persistently ranged from 100 to 120 a minute although greatly improved in tone and rhythm. Notwithstanding the great improvement in ventricular adequacy, the sphygmograph and examining finger fail to detect any distinct element of tension in the pulse. Meanwhile the vasomotor phenomena (fine tremor, excessive pulsation, sweating) have continued unchanged, and recently increasing irritability of temper, failure of memory and power of concentration point to developing psychosis.

Under very moderate dietetic control the glycosuria remains at a minimum and polyuria, polyphagia and polydipsia have disappeared. This amenability to treatment indicates a diabetic glycosuria of extremely mild type, probably corelated to the thyroid toxemia.

The persistence of albuminuria after the therapeutic test of continuous digitalis administration until cardiac adequacy was restored, marks it as being independent of circulatory failure in its origin—in fact, a true renal albuminuria. This deduction is proved correct by the low urea excretion, the presence of degenerative tube casts and finally by the incontrovertible evidence of albuminuric retinitis typically developed in both eyes.

That exophthalmic goiter exists I think there can be no question. With the exception of the ocular signs, the symptom complex is complete, including goiter, tachycardia, fine tremor, emaciation, excessive sweating and vasomotor paresis.

The cardiac lesion is a double mitral one, an associated regurgitation and stenosis. The element of stenosis marks it as probably being of endocarditic origin and not primarily produced by the Bright's disease or by the exophthalmic goiter.

We have, then, clearly established in this patient the unique association of the following lesions: Exophthalmic goiter, diabetes, Bright's disease, mitral disease and retinitis.

The chief interest of the foregoing case is in the clinical values which it includes. These comprise the problems of the association of glycosuria and exophthalmic goiter, the influence of the latter and of Bright's disease in causing valvular defects and the differentiation of secondary cardiac lesions so caused from those of antecedent but obscure endocarditic origin. There is involved as well the question of the association of glycosuria and nephritis and finally the interpretation of retinitis occurring in cases presenting both glycosuria and albuminuria. These are without exception vital problems in clinical medicine and their bearing on the present case constitutes my warrant for reporting this incomplete clinical history.

Glycosuria as a secondary or symptomatic manifestation is of frequent occurrence during the progress of a variety of pathologic states. It is met in many functional and organic nervous diseases, in many infectious diseases and systemic toxemias, and after the administration of various drugs. The exact manner in which carbohydrate metabolism is affected in so wide a range of clinical conditions is not definitely known. Accumulating evidence points with strong probability to the assumption that any nutritive perversion of toxic or infective origin is capable of so influencing carbohydrate assimilation by its effects on cellular vitality as to produce glycosuria: Exophthalmic goiter has long been recognized as exerting a p[illegible] [illegible]bing influence over the metabolism of [illegible] It has been found that glycosuria of a purely functional type (*glycosuria e saccharo*) can be produced by the alimentary test in exophthalmic goiter in a much higher percentage of cases than in health (Chvostek, Kraus and Ludwig, Strauss). It is a question, however, whether the proportion of cases so affected is much greater in this disease than in many nervous affections and diseases characterized by toxemia. Stern claims that *glycosuria e saccharo* is no more frequent in exophthalmic goiter than in some other conditions, notably gastric hyperacidity, in which he was able to demonstrate the reaction in 12 per cent. of 42 consecutive cases. It would appear that we are not warranted in drawing any conclusion from the presence of a lowered carbohydrate tolerance in exophthalmic goiter beyond the general existence of disturbed assimilation.

It is demonstrated by a considerable array of recorded clinical observation that this disease and true diabetes mellitus are not infrequently concurrently present in the same individual. A few instances are on record in which diabetes existed before the advent of exophthalmic goiter. A greater number of cases is recorded in which either the two diseases developed synchronously or exophthalmic goiter antedated the diabetes. The underlying factor in this association still awaits demonstration. The most suggestive feature of the corelation of the two states is that the administration of thyroid preparations will frequently produce glycosuria and when that symptom already exists will often render it more intense. Glycosuria not only results in subjects who are already the victims of thyroidism, but in apparently healthy individuals. This phenomenon can not be dismissed with the assumption of Strauss that thyroid preparations produce glycosuria only in subjects that are predisposed to it. Bettmann was able to produce glycosuria by a week's thyroid medication in 12 out of 25 normal healthy people. It is not reasonable to suppose that so large a proportion of healthy individuals (48 per cent.) is predisposed to glycosuria. This power of thyroid preparations to cause glycosuria may be regarded as similar to the effect of suprarenal extracts which are capable of inducing glycosuria. It speaks in favor of a grave influence over carbohydrate metabolism and leaves us to perforce accept the conclusion that the perverted thyroid activity of exophthalmic goiter disease is at least a factor in producing the associated glycosuria. In other pathologic states associated with hyperactivity of the thyroid, viz., chlorosis, acromegaly and pregnancy, glycosuria is frequently noted as a development.

I think it improbable that the thyroid is directly oncerned in carbohydrate assimilation. The most reanable explanation of the glycosuria of this disease s that it is a toxic glycosuria, the toxin consisting of the thyroid or parathyroid secretion, which results from the abnormal gland activity. The appearance of glycosuria in exophthalmic goiter or its increase when already present may be taken as evidence of increasing thyroid toxemia and, consequently, may prove an indication of prognostic value. The instance constituted by the foregoing reported case appears to be a mild diabetic glycosuria developing during the course of exophthalmic goiter. The exact relation in time to the primary disease can not be determined owing to lack of data, but it is clear that the thyroidism antedated the glycosuria by a considerable interval.

The effects of exophthalmic goiter on the heart are marked and constant although not characteristic in type. A certain amount of cardiac enlargement almost constantly exists and in many cases murmurs are to be heard over the heart. Russel Reynolds found cardiac murmurs in two-thirds of his cases, Mannheim in 5 out of 41 cases, Murray in 41 out of 120 cases. When a systolic murmur develops it is frequently audible over the whole heart, with greatest intensity near the sternum or at the base of the heart. Such a murmur may be hemic in origin if anemia is present, although anemia is not a necessary concomitant of this disease. It may at times be heard distinctly at the apex and sometimes to the left of the apex, having all the characteristics of a mitral murmur. There is a probability, then, that actual mitral insufficiency has developed, the result of dilatation of the left ventricle, the mitral valve orifice sharing in the dilatation. It is proved by clinical experience not only that mitral regurgitation may be produced in this manner by the heart strain and denutrition of exophthalmic goiter, but also that the cardiac phenomena may closely simulate those of organic defects produced by endocarditis. If evidence of valve lesion is found in this disease, the cardiac disturbance is not to be regarded as necessarily dependent on the exophthalmic goiter. The question of structural heart disease co-existing with the thyroidism is to be considered and this will chiefly be determined by the nature of the consecutive changes in the heart chambers and the antecedent history. In some cases, cardiac lesions have undoubtedly preceded the disease and in a few instances rheumatic antecedents may be elicited, in which case the murmur may reasonably be attributed to rheumatic endocarditis. Unless the question of antecedent endocarditis can fairly be raised, the murmur may be interpreted as due to relative mitral insufficiency from ventricular dilatation. The cardiac enlargement and murmur of exophthalmic goiter are not so permanent and do not produce such grave consequences on the heart and circulation as are wrought by the valvular defects of endocarditis. The evidence of cardiac impairment is often found to improve *pari passu* with the disease, and it may perhaps disappear as the systemic state improves. Slight mitral endocarditis has occasionally been found after death in this disease, probably due to mechanical strain of the valve. The experiments of Roy and Adami demonstrate that, as a result of overstrain, ecchymosis and roughening of the valve may be produced, resulting in incompetence.

The frequency of secondary heart lesions in chronic Bright's disease is too well known to require elaboration. A systolic murmur at the apex is extremely common in cases in which arterial tension is greatly increased. Indeed, sooner or later in most cases of chronic Bright's disease and especially during the terminal stage, a murmur in the mitral area and ventricular enlargement may be made out. The walls of the ventricle have yielded under prolonged strain and the curtains of the mitral valve become drawn one from the other to such a degree that they are imperfectly opposed during systole and regurgitation ensues. In such case there is no history of antecedent rheumatism or of endocarditis. Usually in cases of mitral disease of endocarditic origin the second sound is feeble or at least not accentuated. In chronic renal disease with mitral complication the second sound is unduly loud and valvular, especially in the aortic area. Chronic nephritis is much more liable to produce endocarditis than is exophthalmic goiter, as is proved by the relatively greater frequency of mitral stenosis in the former than the latter disease.

In the case reported, a double lesion of the mitral valve exists, with great enlargement of the heart and with cardiac inadequacy. The etiology of the valvular lesion comes under discussion. Exophthalmic goiter and chronic nephritis, both well established, exist, and either is capable of producing mitral disease. Two organic lesions, regurgitation and stenosis, are clearly indicated in our case by the double murmur presystolic thrill, and extensive consecutive changes in the heart chambers. This at once eliminates the purely mechanical element as an acceptable explanation of the lesions and marks the case as of inflammatory origin. Exophthalmic goiter is excluded by the profound character of the organic changes in the heart, for neuro-cardiac disturbance of itself is incapable of such consequences. Chronic Bright's disease is far more deleterious in its influence on cardiac welfare than is exophthalmic goiter, and in its full development the nephritic heart is often a very large and defective organ. The element which brings about such dire consequences to the heart is high peripheral resistance in the arterial field.

In this particular case no material increase of systolic blood pressure was noted during the period of observation, and the sphymogram failed to reveal the element of tension characteristic of the nephritic state. Whether this effect was due to the low vasomotor tone of the accompanying exophthalmic goiter or was directly attributable to the weak cardiac state I am unable to say, although inclining to the latter opinion, since exophthalmic goiter is a hypertensive disease rather than the reverse. In view of these facts, we may conclude that the cardiac lesions are the result of antecedent endocarditis although it is fair to presume that the circulatory state is greatly aggravated by the associated diseases. The absence of a rheumatic history can not be taken as negative evidence.

No direct association exists between exophthalmic goiter and nephritis, although transient albuminuria has been noted during the periods of acute disturbance. Chronic Bright's disease is not numbered among the epiphenomena of exophthalmic goiter, although there is no reason to believe that the toxemia of the latter disease is incapable of setting up degenerative renal change if long enough continued.

Diabetes and chronic Bright's disease, on the contrary, are very frequently associated. In a consideration of this subject presented before the American Medical Association in 1903,[1] I demonstrated that the average of diabetics displaying albuminuria was over 43 per cent. The renal changes are of the nature of chronic interstitial nephritis and result from long-continued irritation of the renal secreting structure.

In the case under discussion there is small likelihood of any relation existing between the diabetes and Bright's disease. The latter is out of proportion to the former and displays an activity seldom observed in the nephritis of diabetes, which is, as a rule, a mild and slowly-progressive dystrophy. The mild character of the diabetes in this case precludes the possibility of such connection.

The interpretation of retinitis in cases displaying both glycosuria and albuminuria offers considerable difficulty. The retinitis of diabetes possesses no distinguishing mark that will enable us to differentiate it from retinitis nephritica. We must depend on other evidence than that furnished by the ophthalmoscope to determine this point. The prognostic value of retinitis is practically the same in diabetes as in Bright's disease, i. e., it is a terminal symptom. Retinitis does not develop in diabetes until late in the disease and is attended by a fully-developed diabetic state, with the patient in bad general condition. Under such circumstances, the glycosuria is not likely to prove amenable to diabetic control and polyphagia, polyuria, etc., will exist with progressive emaciation and increasing adynamia. In this case some doubt existed after ophthalmoscopic examination as to whether the retinal changes were produced by the diabetes or by the nephritis. This uncertainty was dispelled by the behavior of the case under treatment and the subsequent complete development of the retinitis.

103 State Street.

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[1] THE JOURNAL A. M. A., Aug. 8, 1903.

The profession of the Northwest should be largely represented at the Portland session, and, since the opportunity is offered to take a most interesting journey at a comparatively slight expense, we advise every one of our readers who can possibly do so to take his vacation this year in this way.—*St. Paul Med. Jour.*

THE NORMAL AND PATHOLOGIC HISTOLOGY OF THE AORTIC AND MITRAL VALVES.

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At the suggestion of Dr. Councilman, we have undertaken in the last few years the study of the aortic and mitral valves from hearts of different ages, representing both normal and pathologic conditions. The study was undertaken in the first place to obtain more definite ideas of the normal structure of the valves, particularly the amount and relation of different tissues entering into their composition; further, to determine the period at which degenerative lesions first appear in the valves and the relation of these degenerations to the different tissues; and finally, to study the relation between such degenerative changes and acute infections.

The work will be considered under these heads:

1. Normal structure of valves and normal variations of structure with age.
2. Degenerative lesions.
3. Acute infections in relation to degenerative lesions.

TECHNIC.

The specimens were obtained from autopsies on 42 hospital patients, varying in age from a child, which died at birth, to a man of 60. The autopsies were made from 12 to 48 hours postmortem. All the hearts were apparently in a good state of preservation. In almost all cases the mitral and aortic rings were cut out together, washed gently, and hardened at once in Zenker's fluid—celloidin was used for mounting in all but a few cases, for these paraffin was used.

The sections were cut out as follows: A segment about one-fourth inch wide was cut from one of the cusps of the aortic valve, including its widest portion. Longitudinal sections of these were used for staining. In the same way, a segment of the broadest portion of the mitral curtain (at the base of the aortic valves) was taken and cut longitudinally, or sometimes several segments were removed when the valve presented any peculiar appearances.

Three sets of stains were used for each specimen. One section was stained with Mallory's differential connective tissue stain, a second with Weigert's elastic tissue stain, and a third with hematoxylin and eosin.

The first of these was found most useful for studying the general anatomy of the valves. The second gave beautiful pictures of the elastic tissue. The third brought out some peculiarities of the staining reactions of the various tissues, and showed best the morphology of the cells and muscle tissue.

1. NORMAL STRUCTURE OF VALVES AND NORMAL VARIATIONS OF STRUCTURE WITH AGE.

Standard works on histology give very meager descriptions of the heart valves. Kölliker describes the auriculoventricular valves as composed of a strong layer of fibrous tissue with abundant elastic fibers running out from the fibrous ring about the valve orifice, each surface being covered with a layer of endocardium which is thicker on the auricular side. He says that the semilunar valves have the same structure, but are thinner.

The works of most of the older writers are either insufficient or inaccurate. Luschke[2] was one of the earliest to describe, and to demonstrate by injections, blood vessels in the *auriculoventricular* valves (1852). Later (1878), he stated the vascularity of, the semilunar valves.[3] There was considerable controversy over these observations. Coen[4] found the mitral valves vascular, but the aortic valves not vascular. Darrier,[5] in a careful work in 1895, found that semilunar valves never contained blood vessels; that a normal tricuspid never contained them; that the large curtain of the normal mitral valve, where its base is applied to the aortic valve, contained numerous vessels as far out toward its edge as the muscular layer extended (i. e., one-fourth way in the infant and one-sixth in the adults); that in pathologic conditions the whole valve might be abundantly supplied with vessels.

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[1] Kölliker: Handbuch der Gewebelehre. Sixth edition, vol. iii, p. 607.

[2] Luschke: Virchow's Arch., vol. iv, 1852.

We find no accurate observations on elastic tissue in the valves up to 1895, when Seipp,[6] in a work on elastic tissue of the heart, goes into the subject at length. A summary of most of the literature on the subject can be found here. Seipp states that the stains used by most previous observers did not give a correct impression of the elastic tissue in the valves. He used orcein and seems to have obtained very good results. In the main, our observations agree with his.

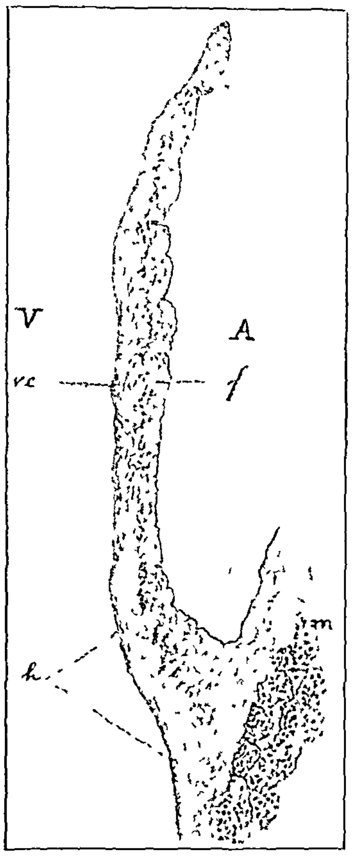

Figure 1.

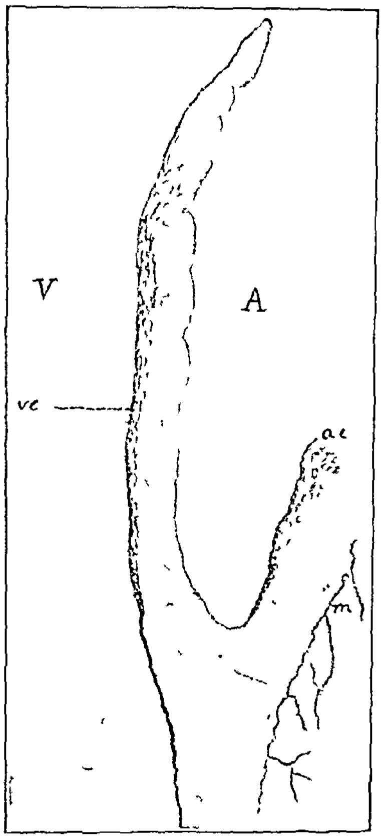

Figure 2.

Fig. 1.—Aortic valve. Age 15 months. V, ventricular side; A, aortic side; vc, ventricular elastic layer; f, aortic fibrous layer; h, hinge area; m, muscle. (Mallory's stain, low power.)

Fig. 2.—Aortic valve. Age 15 months. V. Ventricular side; A, aortic side; vc, ventricular elastic layer; ae, aortic elastic layer; m, muscle. (Weigert's elastic tissue stain, low power.)

Only a few writers give a detailed description of the tissues entering into the various layers of the valves. Curtis[7] enumerates four distinct layers of the semilunar valves, but does not describe them *in detail.* Veraguth[8] describes various layers of the auriculoventricular and semilunar valves according to the appearance of the cells and intercellular substance, and according to the *embryology* of the structures as given by Hertwig.[9]

According to Veraguth, the valves consist of five layers, as follows:

1. Under the endothelial covering of the valve a thin layer of tissue rich in cells with small spindle-shaped nuclei and some with larger nuclei.
2. Under this, a more distinct zone of a few large cells (as 6-1 to cells in first layer) with much intercellular substance.
3. In the center, a layer of fibers running parallel to the rim of the valve and especially marked (in case of auriculoventricular valves) where the chordæ tendineæ are attached. This layer also possesses a few large cells.

Nos. 4 and 5 correspond to 2 and 1, respectively, on the other side of the valve.

In the mitral valve the central layer is pronounced, but in the semilunar valves it is practically wanting, so that the valve by the union of layers 2 and 4 consists of but three layers.

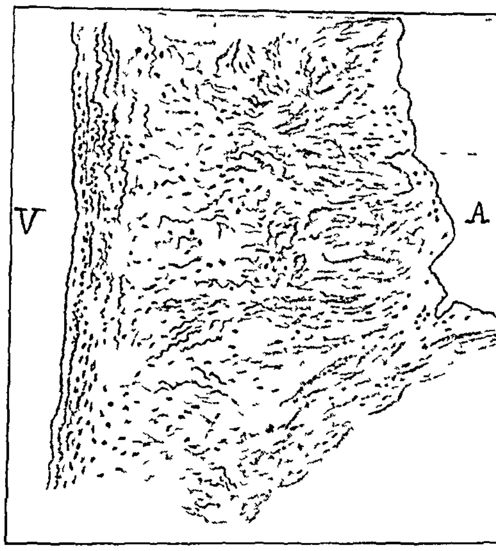

Fig. 3.—Aortic valve. Age 15 months Shows "hinge area." V, ventricular side; A, aortic side. Shaded area on ventricular side contains elastic tissue and a few scattered connective tissue fibers. Central portion composed of very loose tissue fibers Denser tissue on aortic side (Mallory's stain, high power)

This arrangement, he says, is borne out by the developmental appearances of the valves in the embryo. According to Hertwig,[9] the auriculoventricular valves are formed by a fibrous degeneration of muscle tissue, which originally surrounded a small auriculoventricular opening. This fibrous tissue is covered on both sides by a layer of "gelatinous" tissue lining the heart. The semilunar valves, being composed only of an outfolding of this same "gelatinous" tissue, have not the same fibrous center.

Veraguth[8] concludes that the two outer layers he describes are remains of the embryologic "gelatinous" tissue mentioned above, and that his central layer in the auriculo-ventricular valves is the fibrous degenerated muscle layer. The valves, according to him, are symmetrical as to their two faces, and if slit down the middle between them would show similar halves.

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[3] Luschke: Verhandl der phys.-med. Gesellschaft in Wurzburg, 1878.

[4] Coen, E.: Ueber die Blutgefasse der Herzklappen. Arch. f. microsc. Anat., vol. xxvii, pp. 397-403.

[5] Darrier, J.: Les vaisseaux des valvules du coeur chez l'homme à l'etat normal et à l'etat pathologique. Arch. de Physiol., No 5, July, 1888, pp. 35-59.

[6] Seipp, L.: Das elastische Gewebe des Herzens. Anatomische Hefte, No. 17, vol. vi. 1895-6, pp. 63-116.

[7] Curtis, F.: Structure des Valvules sigmoides de l'aorte, etc. Societé de Biologie, vol. xl, 1888, pp. 591-594.

[8] Veraguth, O: Untersuchungen über normale und entzundete Herzklappen. Arch. f. pathol. Anatomie, vol. cxxxix, pp 59 80

[9] Hertwig: Embryologie Third edition, 1890, p 457.

This assertion we find to be more nearly true of the aortic valves than of the mitral; but even in the latter the distribution of the elastic tissue on the two faces is not at all the same, and the layer of muscle so often seen is always near the auricular surface. Of the aortic valve, this is not true at all, as can be seen from the drawings accompanying this article.

The following description is from normal aortic and mitral valves of various ages, cut and stained by the methods already described.

A. Normal Aortic Valves. From Birth to Perhaps Five Years of Age.—The valve is composed of (1) fibrous and (2) elastic tissue.

1. Fibrous Tissue: This tissue is densest on the aortic side of the valve. It is denser toward the tip than at the base. The fibers of the aortic side are for the most part cut in cross section, i. e., their direction is circular. Some, however, are longitudinal or nearly so. Cells are not numerous. In the middle plane of the valve, the fibrous tissue is not dense. The fibers are arranged in small spiral bundles, some of which run in the long axis of the valve (especially near the ventricular side), while others run from one surface toward the other. The cells are larger and more numerous. Many of the fibers are extremely fine and wavy (this layer which we have spoken of as lying in the middle plane, is really nearer the ventricular side, directly beneath the ventricular elastic layer. It is so spoken of because it lies between this layer and the dense fibrous tissue of the aortic side. If this latter layer is unusually narrow it really appears to lie in the middle.) On the ventricular side of the valve there are only a few wavy, longitudinal fibrous bands mingled with the elastic tissue of the part.

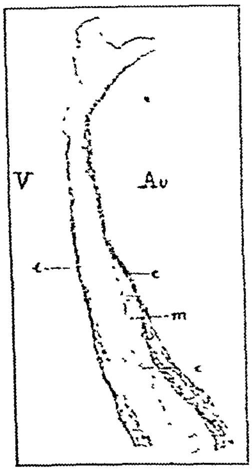

Figure 4.

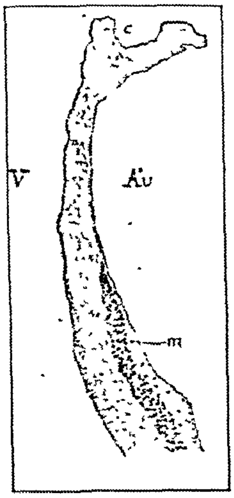

Figure 5.

Fig 4.—Mitral valve. Age 15 months. V. ventricular side; Au, auricular side; e, elastic layer; m. muscle. (Weigert's elastic tissue stain, low power.)

Fig 5.—Mitral valve. Age 15 months. V, ventricular side; Au, auricular side; c, chordæ tendinæ; m, muscle. (Mallory's stain, low power.)

At the base of the valve, in what might be called the "hinge area," the middle layer of very loose fibrous tissue is so broad as to occupy nearly the whole width of the valve, but immediately beyond this it becomes much thinner. Toward the end of the valve it is invaded by a few longitudinal bundles of fibers of the ventricular side, and finally is obliterated, the dense layer of the fibrous tissue on the aortic side meeting the ventricular elastic layer (Fig. 1).

2. Elastic Tissue: This tissue is densest on and practically confined to, the ventricular side of the valve. The fibers run for the most part longitudinally, immediately beneath the surface endothelium. Among them are a few crosscut (i. e., circular) fibers, and beneath the main layer of longitudinal fibers these crosscut fibers form a fairly distinct band.

The elastic layer begins at the base of the valve as a very dense band of fibers in which the individual threads can not be distinguished. It broadens as it goes out on the valve so that the individual fibers can be clearly seen, being, at its broadest part, from two-thirds to three-fourths of the distance from base to tip. Here the fibers invade the middle layer of the valve to a considerable extent. Beyond this the layer thins out rapidly, though tissues having the same appearance as that in which the elastic fibers are embedded run to the end of the valve as a definite layer containing almost no connective tissue fibers. This appearance is well shown in specimens stained by Mallory's connective tissue stain. Here this layer is seen extending well to the tip of the valve, but with the elastic stain no elastic fibers are seen beyond the inner three-fourths. Just at the tip of the valve, on the ventricular side, a well-marked layer of circular fibers is often seen (Fig. 1).

On the aortic side of the valve there is a thin layer of crosscut elastic fibers, immediately beneath the endothelium. This layer keeps its same character throughout the length of the valve. Among the fibrous tissue at large, occasional elastic fibers are found, running in various directions.

The "hinge portion" of the valve is that part particularly adapted to easy bending. In it the fibrous tissue of the aortic side is thin, the central loose tissue is abundant, and the elastic layer of the ventricular side is thin, dense and strong. Its size varies considerably in different valves. It often takes a peculiar blue stain with hematoxylin (i. e., the loose central part), analogous to myxomatous tissue, but the continuation into the main part of the valve seldom shows this reaction (Fig. 3).

B. Normal Adult Aortic Valves.—The fibrous tissue is again densest on the aortic side. The bundles are thicker, less wavy, and with more tendency to longitudinal arrangement than in the infantile valve. The valve is less cellular. The middle plane of the valve, which in the infant is occupied by a fairly broad band of very loose cellular tissue, is much narrower in the adult, being encroached on by the dense fibrous tissue of the aortic side and driven up against the ventricular elastic tissue layer. The latter contains rather more fibrous tissue.

The elastic tissue is arranged as in the infantile valve, but is denser and continued on both sides more distinctly to the tip of the valve. It seems as if the elastic forming layer (noticed along the ventricular side of the valve) of the infant had formed its elastic fibers completely in the adult. There are also more elastic fibers mingled with the fibrous tissue at large and in the "hinge area."

While the relation of fibrous and elastic tissue is constant in valves of different ages, there is a progressive change toward an adult type. This consists of a thinning of the valve in proportion to its length; in a condensation of the fibrous tissue, the densest part of which, lying in the infant near the aortic surface, comes to occupy the greater proportion of the width of the valve, while the loose layer in the middle plane becomes reduced in thickness; and in a considerable increase in the quantity of the elastic tissue both on the valve surfaces and in the valve substance.

In many infantile valves the tip of the valve forms a sort of knob connected with the rest by a very thin portion. This arrangement we have never seen in adult valves. In one adult valve in our collection a few isolated bundles of muscle fibers, circular in direction, are seen in the ventricular elastic layer.

C. Normal Infantile Mitral Valves (large mitral curtain).—The mitral valve is somewhat stronger, thicker and less flexible than the aortic. It consists of a fibrous plate which tapers a little from base to free edge, where it becomes differentiated into the chordæ tendineæ. It is supplied at its base and for a variable part of its length with cardiac muscle. It possesses a thick covering of elastic tissue on both its surfaces at its base, but the layer on the ventricular surface thins out rapidly as it passes out on the valve (Figs. 4 and 5).

The fibrous tissue occupies the greater part of the thickness of the valve. It is densest on the ventricular side. The fibers are more generally circular in direction and the cells rather few in number. Under the elastic yer of the auricular side of the valve the fibrous tissue thinner, more cellular and consists of wavy bundles either longitudinal in direction or running from one surface of the valve toward the other. This arrangement corresponds to that of the aortic valves, but in the mitral valve the dense fibrous layer occupies much more of the thickness of the valve. As the region of the chordæ tendineæ is reached the fibrous bundles becoming longitudinal in direction stream out into them from the ventricular surface.

The elastic tissue is seen on both sides of the valve. On the ventricular side it is continuous with the elastic layer of the ventricle and is thick and strong at the base of the valve, being composed of wavy layers of fibers longitudinal in direction. It thins out rapidly and dwindles to nothing about two-thirds of the way from base to tip. On the auricular side the elastic layer is equally thick and sometimes denser. It is composed of many layers of fibers longitudinal in direction and diminishes in thickness as it extends outward. At a point from two-thirds to three-fourths of the distance from the base to the tip it spreads out away from the auricular surface, but part of it can be seen continued beneath the endothelium nearly to the tip. It is embedded in the same sort of tissue as that on the ventricular side of the aortic valve and has among its fibers and beneath it a few fine wavy bundles of fibrous tissue. Between the main fibrous layer and the wedge-shaped area of muscle at the base of the valve is a layer of elastic tissue generally circular in direction. There are a few elastic fibers among the muscle fibers.

In a general way the arrangement of elastic tissue resembles that of the aortic valve, but differs in the thickness of both layers at the base. There are occasional elastic fibers in the fibrous tissue occupying the middle plane of the valve.

Muscular Tissue.—The mitral curtain possesses a strong wedge-shaped area of muscle at its base. The muscle is of the usual cardiac variety and its fibers are circular in direction. The amount of this muscle and the extent to which it runs out on the valve vary widely. In some cases it extends out as a long wedge for nearly half the length of the valve. In other cases it ends abruptly at the base. It is always found immediately beneath the auricular elastic layer. Sometimes the main mass of muscle is confined to the base, while a thin band of muscle broken up into small bundles extends out nearly to the tip. In such cases it lies in the auricular elastic layer. Occasionally isolated bundles are seen scattered along the layer.

D. Adult Normal Mitral Valve.—The adult mitral valve bears the same relation to the infantile as does the aortic. The elastic tissue is much more fully developed and the fibrous tissue more dense. The chordæ tendineæ can now be seen to possess a thin longitudinal layer of elastic fibers close to their surface.

The valve is much longer in proportion to its thickness, and the muscular portion shorter as a general thing in proportion to the whole length of the valve. In all cases in which muscle tissue is seen definite blood vessels are found and may extend well out to the edge of the valve. They are always with the muscle on the auricular side.

II. DEGENERATIVE LESIONS.

Under this head will be considered thickenings whose pathologic character is in doubt. There is little in the literature on this subject. Veraguth[8] describes certain thickenings on the valves, which apparently are not pathologic in character. These are seen at any age. They are apt to appear at the points where the valve surfaces come in contact with each other in closing, and are apparently developed from his "second" layer. They consist, he finds, of a very dense connective tissue formation, sometimes almost homogeneous in appearance and containing a few drawn-out, shrunken cells. He considers them to be a development from embryologic remains which take on growth, perhaps, because of irritation from the coming together of the valve surfaces. He points out that they are not a result of hypertrophy from work, as they are found in the very young, nor are they remains of acute infections, as the layer between them and the surface is unchanged.

We have frequently found such thickenings accompanied or unaccompanied by definite pathologic changes. In aortic valves they occur on the ventricular surface. where the valves meet in closing. They are conical or rounded in shape. They consist of tissue such as is described above, but contain in addition many fine elastic fibers. They appear to grow, in fact, from the ventricular elastic layer which forms their base. We have found them in a child 5 years old and at various other ages, but in later life they are generally accompanied by certain degenerations in the valves which will be described later. In addition to the hypothesis given by Veraguth as to their origin, it might be suggested that they are an adaptation acting to correct a faulty closure of the valves. They are best seen on the aortic valves and often on one or perhaps on two cusps only.

Degenerative lesions in the aortic valves are of the following types: (a) mucoid, (b) fatty.

(a) *Mucoid Degeneration.*—In the normal anatomy of the aortic valves already described, a layer of loose cellular tissue was mentioned, very wide at the "hinge area" of the valves and running from here toward the free edge, between the ventricular elastic layer and the dense aortic fibrous layer. In young valves this was found to take at times a deep blue stain with hematoxylin, thus resembling myxomatous or mucoid tissue.

In older valves, tissue having this same appearance is seen as a degenerative lesion more commonly than any other. It occurs toward the tip of the valve beneath the ventricular elastic layer and encroaching considerably on the dense fibrous tissue of the opposite surface. Such areas show an increased number of large cells with round or oval nuclei and few connective tissue fibers, many of which appear fragmented. While they generally stain blue with hematoxylin, they sometimes take practically no stain at all, there being little intercellular substance left. Stains for elastic tissue show a few elastic fibers.

This condition very frequently accompanies and may occur in the midst of large thickenings on the valve surface. The youngest valve in our collection which shows such a degeneration is one cusp of an aortic valve (the other cusps being normal) of a woman, aged 24, dead of pneumonia and empyema. The degenerate area is beneath a moderate thickening on the ventricular surface. The natural explanation of this condition is that the thickening by interfering with the nutrition of the valve caused the degeneration, for such myxomatous or mucoid tissue is often seen in the midst of very large thickenings. Attention has already been called to the fact that the layer in which the myxomatous degeneration is found is one which in young valves sometimes presents something of the same appearance throughout its length.

Mitral valves, like the aortic, are apt to show thickenings on the auricular side where the valves meet, but we have not noticed this in young valves, and the thickening is apt to include the whole width of the valve. Mucoid degeneration is very common in the midst of them.

(*b*) *Fatty Infiltration.*—In aortic valves this occurs most often midway from base to tip, almost never near the base, and frequently throughout the outer half. It occupies the middle plane of the valve encroaching much more on the ventricular elastic layer than on the dense fibrous tissue. The majority of our valves of over 30 years show more or less of this condition, which is usually accompanied, when extensive, by a generally diffused thickening of the ventricular surface, analogous in this respect to the sclerotic changes in arteries. The fat cells are often very large and are apt to lie in groups among the elastic fibers, often pushing them aside.

The fatty changes in mitral valves take place in the auricular elastic layer and just beneath it. In distribution and arrangement they resemble those in aortic valves. They are more often seen, however, near the base of the valve than in the aortics.

III. ACUTE INFECTIONS IN RELATION TO DEGENERATIVE LESIONS.

We hoped on beginning this investigation to find some degenerative lesions directly connected with acute infections, such as pneumonia, typhoid, diphtheria, etc. It has been disappointing, therefore, to find that in valves of those dead of such diseases there appear only degenerations which are evidently chronic, or at least none which we can recognize as acute. In fact, we find in no valves from pneumonia patients, etc., a predisposing cause for acute endocarditis.

A good account of the pathologic anatomy of acute valve infections is given by Veraguth,[8] who quotes experimental results of other investigations on this subject. We have only seen one instance of an acute infection in valves not previously diseased (i. e., thickened). In this case (mitral valve) there was a destruction of tissue on the auricular side of the valve near the tip, extensive fibrin formation in the necrotic tissue, and beneath this, in the main substance of the valve, a considerable proliferation of large connective tissue cells. Large masses of streptococci were seen in the necrotic area. The great increase in the number of connective tissue cells about the infected area is spoken of by Veraguth, who states that apparently they take the place of polynuclear leucocytes, which are not present to any extent. These cells are large, round and oval in shape, with a rather deeply stained granular protoplasm and a comparatively small round nucleus. They resemble plasma cells. No blood vessels are seen, new or old. It is an interesting fact that the pulmonic valves were severely infected in this case, while the aortic valves were normal.

A number of our specimens showed acute infections superimposed on chronic thickenings. Most of these were in mitral valves. They showed a fibrinous or fibrino-purulent exudate on the surface and extending into the valve substance for a varying distance, always from the auricular surface. In many cases, when the valve was much thickened, there was a considerable collection of what looked like plasma cells about the blood vessels, which were often numerous and sometimes quite large. In these cases the cells seemed to be connected with the repair of the valve, as young blood vessels and young connective tissue cells were in abundance.

In some cases the relative age of the different depths of a thickening could be told fairly well. Furthest from the auricular surface the tissues and blood vessels were richly supplied with elastic fibers. Nearer the surface the tissue became less elastic and more like ordinary scar tissue, while the vessels were smaller and younger. On the surface, when the repair from the last attack was still going on, the young connective tissue cells were large and abundant, and the vessels thin-walled and capillary. Such conditions would seem to show that the thickening was due to repeated attacks of acute infection. At other times it was impossible to tell whether the thickening was of the benign type described earlier or of the type we have just described. We think that the vascularity of the thickened tissue would generally show the difference, but further observations are needed.

We have not noticed in mitral valves such extensive destruction of a large, thickened flap as in aortic cases. In one of these a very large, thickened tip was practically eaten away from the ventricular side. It seems evident that a valve which has no internal blood supply can not repair itself so well as one in which the blood supply is abundant. This valve in which the destruction of tissue was extreme, possessed only a number of capillary vessels with no elastic tissue in their walls; vessels which were connected apparently with the surface of the valve only, and were little more than blood spaces. Indeed, there was little attempt at repair in this case, and it would seem as if an aortic valve stood a poorer chance of repair without deformity than a mitral valve under similar circumstances.

We can only conclude from our observations on acute infections in degenerate and thickened valves that mucoid and fatty degenerations do not apparently predispose to infection; that "benign thickenings" do not predispose to infection, though it is hard in the case of the mitral valve to tell whether a thickening is benign or due to repeated acute attacks; that the thickenings in mitral valves when infected are better repaired than in those of aortic valves; and that acute toxemias do not cause degenerations (at least none that we can recognize) predisposing to infection.

GASTROENTEROSTOMY.*

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It is conceded by the best authorities in both surgery and internal medicine that efficient drainage by some of the various surgical operations devised is the correct and only successful treatment for many diseased conditions of the stomach and duodenum, usually diagnosed as chronic indigestion; and for hemorrhage in acute ulcer of the stomach that resists medical treatment and is endangering the life of the patient; or for continued and profuse hemorrhage in chronic gastric ulcer; and for perigastric adhesions or stomach infiltration and contraction, that disturb the physics of digestion. There *is not a consensus of opinion* by our best abdominal surgeons, however, as to the method of drainage that accomplishes the best results in all cases. Hence, let us consider the facts bearing on the operations that have been performed, and decide which one of the several is the most logical, and has given and must give the best immediate and ultimate results. Pyloric divulsion by the method of Lorata and Hahn has proved unsatisfactory, seldom giving permanent relief, and sometimes committing a traumatism that intensifies the trouble. While the Heineke-Mikulicz pyloroplasty and its modifications by Richardson, Koeppelin and Jaboulay have given better results, it is an operation seldom indicated and is practically obsolete. Jaboulay's gastroduodenostomy, as modified by Duranti and Henle, has given better results than pyloroplasty, but it is far from satisfactory, and in many cases is impracticable, and cannot be performed because of extensive adhesions. In establishing stomach drainage into the duodenum, Villard's subpyloric gastroduodenostomy as modified by Kocher's lateral gastroduodenostomy, with vertical division of the duodenocolic peritoneum, and Finney's gastropyloroduodenostomy, are the most popular, and will probably give better results, but these operations are too recent, and the cases too few to enable us to give a positive opinion of their merits, and there are many cases in which they cannot be performed, or are contraindicated. Their simplicity can not recommend them, because gastroenterostomy can be performed as easily and as quickly, and with a mortality as low. Then in excluding these operations in favor of gastroenterostomy, we must decide which method of draining the stomach directly into the jejunum has the lowest mortality, and gives the best immediate and final results.

The Wolfler anterior anastomosis and the von Hacker posterior anastomosis, with their modifications, must be carefully considered, in order that we may arrive at a conclusion as to the relative value of each. In a paper read before the Kentucky State Medical Society, in May, 1904, I made the following statement:

> Anterior gastroenterostomy as an operation of election must very soon become obsolete, and will finally be accepted only in rare cases as an operation of expediency or necessity to give temporary relief, or to meet special abnormal conditions.
>
> The ideal operation of election must eliminate the intestinal loop, and this can only be done by the posterior retrocolic method, attaching the jejunum near its origin under the transverse mesocolon to the lowest part of the stomach. This prevents the vicious circle and regurgitant vomiting—the most fatal complications.

Anterior anastomosis has given many excellent results, and the complications of the earlier operations have been greatly diminished because of the more correct appreciation of the proper point of the stomach and jejunum to be anastomosed, and the improved technic in the operation. In the older operations, the opening into the stomach was made too high, and often not in the proper direction, and the jejunum was attached too near or too far from its origin under the transverse mesocolon; hence, stomach drainage was imperfect, permitting a residuum of decomposed stomach contents with bile and pancreatic secretions, which caused much trouble, *often resulting* in the passage of food and secretions into the proximal end of the anastomosed bowel, with a high mortality or subsequent complications. Of the 35 gastroenterostomies performed between 1881 and 1885, only 12 patients recovered; the mortality being 66.71 per cent., and of the 1,978 gastroenterostomies up to 1899, the mortality was 34.4 per cent., but fortunately it is now below 5 per cent. in the anterior anastomosis, but the immediate and subsequent complications and ultimate results are greater than in the posterior anastomosis. Robson's mortality by the posterior retrocolic method, in about 200 cases, including cancer cases and cases of acute gastritis, is 4 per cent., and in his private practice, including 15 cancer cases, it is 3.2 per cent., and in 77 simple cases, 2.62 per cent.; and Moynihan, in 191 operations, had but five deaths, 2.63 per cent., with practically no complications. Three of these deaths occurred in his 27 cases in which the patients were operated on for hemorrhage where the condition was desperate; one death was caused by suppression of urine, and another was caused by hernia of the intestines through the opening in the mesocolon into the small omental bursa. Mayo's mortality in his last 150 cases is under 3 per cent. Kocher, in the last edition of his book on operative surgery, reports 100 anterior gastroenterostomies with three deaths, none due to the operation direct, but he now prefers the posterior retrocolic attachment.

Neither Robson, Moynihan, Kocher, von Mikulicz, Mayo, Murphy, Park, or other surgeons report any vicious circle or regurgitant vomiting, or subsequent closing of the gastrojejunal opening following the recent operations by the posterior retrocolic attachment with no loop, conditions frequently reported by Mayo and other surgeons following the anterior anticolic attachment, causing death, or requiring a secondary operation. The side-to-side jejunal anastomosis prolongs the operation, increases the dangers, disturbs normal peristalsis, and does not always prevent the vicious circle; the other mutilating operations of closing the pylorus or proximal end of the jejunum by resection, wire or suture constriction, are superfluous and may cause immediate or subsequent bad results. The belief that the passage of bile and pancreatic secretions into the stomach is responsible for bad results, has been disproved by actual observation in experiments in animals and in operations on man, and it is probable that their presence in the stomach may so alkalize the stomach contents as to aid in preventing jejunal ulceration in the distal end, a complication that has occasionally followed gastroenterostomy.

The observations of Fantino, Hartman, Carle, Sipault, Mintz, Clumsky, Kautsch and Mathieu seem to show that in all cases of gastroenterostomy the bile and pancreatic secretion pass through the gastrojejunal opening into the stomach, causing no regurgitant vomiting or disturbance in digestion. We arrive at the same conclusion of the innocuousness of bile and pancreatic secretion in the stomach, in studying the case of Moynihan, in which he severed the jejunum near its duodenal junction, closed the proximal end and then implanted the distal end in the anterior wall of the stomach, thereby causing all the bile and pancreatic secretion to pass into the stomach. This caused neither vomiting or disturbed digestion. The same is true of Steudel's experiments on dogs, and is also true in the broad experience in gastroenterostomy by Robson, Czerny, von Mikulicz and Moynihan. Hence we must look for some other cause for the vicious circle and regurgitant vomiting, since neither the presence of bile or pancreatic secretion causes the trouble, and this will be found in the election of methods, based on a false assumption of the physics and physiology of digestion, and a defective technic.

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* Read before the American Gynecological Society at Niagara Falls, 1905.

The Raux and Doyen operation, theoretically suggested by Wolfler, of cutting the intestine across and implanting the distal end into the stomach, and the proximal end into the side of the distal, may prevent regurgitant vomiting; but it is difficult and prolonged and if universally accepted would have a mortality that would be prohibitory. The stomach anastomosis by this method may be made anteriorly or posteriorly, but the posterior method is preferable and the results better.

Ulcer in the upper part of the attached jejunum has followed this operation, but Raux claims that this is because the proximal limb was attached too low on the distal limb, though further observation is necessary to prove the correctness of this statement, for in his operation the bile and pancreatic secretion cannot enter the stomach to modify in any way the degree of hyperchlorhydria, or to change the character of the stomach contents.

While the immediate complications and sequelæ of Wolfler's anterior anticolic gastroenterostomy have been minimized, they are still far in excess of the complications and sequelæ of the modifications of von Hacker's posterior retrocolic anastomosis without a loop, for it does not prevent the vicious circle; it greatly disturbs the normal relations of the jejunum and transverse colon, and it does not insure permanency in the gastrojejunal opening, objections that do not obtain in the posterior retrocolic attachment near the beginning of the jejunum. I, therefore, assume that with fewer complications and sequelæ, and with better immediate and subsequent results, the posterior retrocolic gastroenterostomy near the duodeno-jejunal flexure, in the near future will be accepted by most of our best surgeons as the operation of election, the anterior method being reserved for conditions that contraindicate the posterior attachment, such as extensive posterior stomach adhesions that cannot be separated, tumors, cancerous infiltration, etc. This is now unfortunately far from true in the United States, for most of our published papers during the last twelve months have advocated a jejunal loop, usually followed by an enteroanastomosis; and many of them recommend closure or narrowing of the pylorus or proximal jejunum by the method of Fowler, Scott and Mattolie, or Doyen and Chaput. Mayo, who has probably performed as many gastroenterostomies as any other surgeon, until recently has made the anterior anticolic attachment, often supplemented by an enteroenterostomy, or by closure of the pylorus or proximal limb of the jejunum; and in nearly all his posterior retrocolic attachments he also made a ten-inch loop with an enteroenterostomy, and closed the proximal limb by suture plication. He seems to have been dissatisfied with these methods, and by a practical evolution in the work of a great surgeon, is now doing the posterior retrocolic anastomosis without a loop, and attaches the jejunum one and one-half inches below its origin. Mayo's change from these complicated operations that so greatly disturb the normal relations, and the physics and physiology of digestion, to the simple attachment of the jejunum to the posterior inferior part of the stomach, with the elimination of the loop, is a most positive proof of the superiority of the latter method, for the excellence of his technic in his surgical work and his broad experience enable him to interpret logically and to accept correct conclusions.

To enable me to present the exact facts as to the methods, the immediate and final results and complications in gastroenterostomy in the experience of men who have done the greatest number of these operations, I have by personal correspondence obtained the desired information from Robson, Czerny, von Mikulicz, Moynihan, Kochen, Murphy, Mayo, Ochsner, Park, and Deaver, and I am able to give results of the observations in their operations to April 15, 1905. I will first give the technic of the operation I am now doing, with nearly perfect results, and then conclude with a summary of conclusions.

An incision about four inches long is made above the umbilicus, splitting the right rectus muscle about three-fourths of an inch from the median line. The stomach, the pylorus, the duodenum, the gall bladder and the bile ducts, and surrounding structures are carefully examined. If a gastroenterostomy is then indicated, the great omentum, the transverse colon and the stomach are delivered and turned above the incision on the abdominal wall, and covered with gauze wrung out of hot salt solution. A bloodless point in the transverse mesocolon, under a loop formed by the middle colic artery, is selected, and an incision is made into the small omental bursa. This is torn larger with the fingers until it is from one and one-half to two inches in diameter —large enough to allow the posterior wall of the stomach to be easily pulled through. The bleeding is usually insignificant, but, if necessary, a small catgut ligature is applied to the torn vessel. With the left hand above the omentum and the colon, the stomach is made to protrude into the opening in the mesocolon, the posterior wall is caught with the fingers of the right hand, or by a tenaculum or small vulsellum forceps, care being taken not to include the anterior wall. The posterior wall is then drawn by the fingers of both hands well through the opening, and a fold from three to four inches in length is caught in the rubber-covered blades of a long forceps. These forceps is applied obliquely on the stomach from the lowest part of the great curvature toward the cardia. This may be easily and correctly done with the stomach turned over on the abdomen above the incision, before applying the forceps from below upward, and from left to right at an angle of approximately 45 degrees with the median line. When the anastomosis is made in this direction and the stomach is returned to the abdominal cavity, the jejunal attachment from above downward will be at an angle to the vertical line of about 45 degrees from left to right. If the anastomosis is made close to the *plica duodenalis*, when the stomach is returned to the cavity, both stomach and jejunum will sustain nearly their normal relations, there being no loop or twisting of the bowel, so that the stomach contents may pass uninterruptedly into the distal end of the bowel, and will not pass into the proximal end. The only change, then, from the normal relation and condition, is the attachment of the stomach and the intestine and the gastrojejunal opening, hence there can be no vicious circle or regurgitant vomiting. The stomach, colon and omentum are now returned into the cavity, above the incision, the clamped part only being held outside. The jejunum is now picked up on the left side of the spinal column, just under the transverse mesocolon, and a loop three or four inches long is caught in the rubber-covered blades of a long forceps from two to four inches below the duodenojejunal flexure, usually two inches.

Gauze wrung out of hot sterile salt solution is now applied under and around the clamps, so as to protect the peritoneal cavity against any possible infection from leakage of stomach or intestinal contents after the stomach and jejunum are incised. The portions of the stomach and intestine embraced in the clamps are brought evenly together, so that the ends of the blades are at the same level at the bottom of the greater curvature of the stomach, which now lies above, and the lesser curvature below. The stomach and jejunum are now united by a line of continuous sutures, including the serous and submucous coats, beginning at the shank of the forceps and going to the end of the blades at the bottom of the greater curvature. The suture line is from left to right, from the proximal toward the distal end of the bowel; and in the direction of the cardia or lesser curvature toward the greater curvature. The line of suture is never less than two inches and in dilated stomachs it may be three and one-half inches, to give room for a long stomach incision, so as to guard against too much narrowing of the gastrojejunal opening after the stomach finally contracts approximately to its normal size. In dilated stomachs, the incision must be made correspondingly long, and the failure to observe this precaution is responsible for bad ultimate results in stomach drainage, because of too much narrowing of the opening after stomach contraction.

I use the Moynihan needle with a slot eye, curved over half circle. It can be quickly threaded and has a round point which does not cut the tissues of the stomach or intestine or cause hemorrhage or tearing. I use the fine Pagenstecher thread, because it sutures better than the silk, and perfect apposition is more easily assured, but the silk suture may be substituted. I leave a six-inch end at the beginning of the suture, and at the end of the first line of suture the thread is left long enough to complete the second line of sero-serous suture around the gastrojejunal opening after the cut edges of the stomach and bowel have been sutured through all the coats entirely around the incision. After the first line of suture is applied, the stomach and intestine are incised one-sixth to one-fifth of an inch away and above down to the mucous membrane, which pouts in the wound and is removed in an elliptical piece about one-half inch wide, for the full length of the incision, but I do not dissect the mucous coat from its stomach and intestinal attachments, as I do not believe it necessary, and it makes correct suturing more difficult to get perfect apposition of all layers.

The second suture also begins at the proximal end of the jejunum and must include all the layers of the stomach and intestine (serous, muscular and mucous), so as to put the cut edges in perfect apposition and leave no open, raw surface. An end of this suture about six inches long is left, and the suture is drawn sufficiently tight not only to secure perfect union but to control bleeding. It is carried entirely around the opening and tied to the end of the suture left at the point of beginning. The clamps are now unlocked, and if any bleeding point is seen, an interrupted suture is applied, but this will seldom be necessary if the suturing has been carefully done.

With the first (sero-serous) suture left long at the greater curvature of the stomach, a line of suture is now applied above and in front of the gastrojejunal opening to the point of beginning, and tied to the end left. This suture includes the serous and sub-serous coats.

The exposed parts of the stomach and bowel are now gently sponged with gauze wrung out of hot salt solution, and allowed to fall back into the abdominal cavity. The omentum, transverse colon and stomach are again delivered on the abdominal wall and with a catgut suture, the edges of the opening through the transverse mesocolon are attached around the gastrojejunal anastomosis. This is done with from four to six interrupted sutures introduced through the serous and subserous tissues of both intestine and stomach, so as to cover the entire area around the gastrojejunal anastomosis and the outer layer of sutures. This prevents hernia of the small intestines into the lesser peritoneal cavity, and adds protection and strength to the anastomosis. If the attachment of the jejunum is made at the proper distance from the duodenojejunal flexure, the only change from the normal relation is the anastomosis of the two viscera, and the relation of the stomach and intestine otherwise will not be changed. I have made careful examinations of these cases after completing the suturing, and know this to be true. The point of attachment of the jejunum in each case must meet the existing conditions, and in no instance after the operation should there be any jejunal loop or any tension on the intestine because of anastomosis too far from or too near the plica. The abdominal incision is now closed with three rows of catgut sutures. As soon as the patient has recovered from the immediate effects of the anesthesia, he is propped well up in bed. This aids in preventing vomiting and encourages the passage of gas through the intestines. These patients vomit less than my patients on whom laparatomies are performed for other diseased conditions. This may be due to the fact that the stomach contents pass so directly and with such ease into the jejunum. Little, if any, of the bile and pancreatic secretion will go into the stomach, but may modify the acid contents in its passage down the jejunum, and probably aid in preventing peptic ulcer in the intestine below its stomach attachment.

Adhesions are often found between the transverse mesocolon and the posterior stomach wall, but these may usually be separated through the opening in the mesentery, and I have not found it necessary to attempt the separation through an opening in the gastro-colic omentum, but this may be done. All perigastric adhesions are dissected away when it is possible to do so.

Where one is accustomed to its use, the curved needle is far superior to the straight, in applying both the internal and the external layer of sutures. In the introduction of the outer sero-serous suture, by drawing gently between the needle and the last stitch, a little ridge will be raised in front of the suture in both stomach and intestine, which will aid in the introduction of the needle with ease and accuracy. The best apposition follows the continuous suture with no interruption, and the various other methods of applying the suture in stomach and intestinal surgery, are unnecessary and may be harmful. With experience in the use of the continuous suture with the curved needle, there are few tissues that are more easily and more perfectly sutured than the intestinal tract.

In suturing openings in the intestines, I often use for the inner suture through all the coats, a No. 0 or No. 1 ten-day chromic catgut, with Pagenstecher thread or silk for the outer sero-serous suture, and I have had no leakage. With the adoption of the retro-colic posterior anastomosis near the duodenojejunal flexure at the lowest part of the stomach, there will no longer be any necessity for mutilating operations for closing or dividing the pylorus or jejunum, or for an enteroanastomosis, and the posterior attachment may be made in nearly every case in which a gastroenterostomy is indicated.

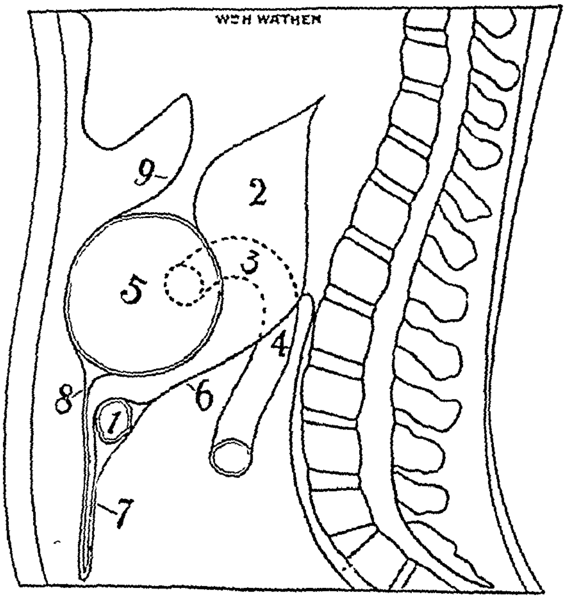

Fig. 1.—1. Transverse colon. 2. Lesser peritoneal cavity. 3. Duodenum behind stomach. 4. Beginning of jejunum. 5 Stomach. 6 Transverse mesocolon. 7. Great omentum. 8. Gastrocolic omentum 9. Gastrohepatic omentum.

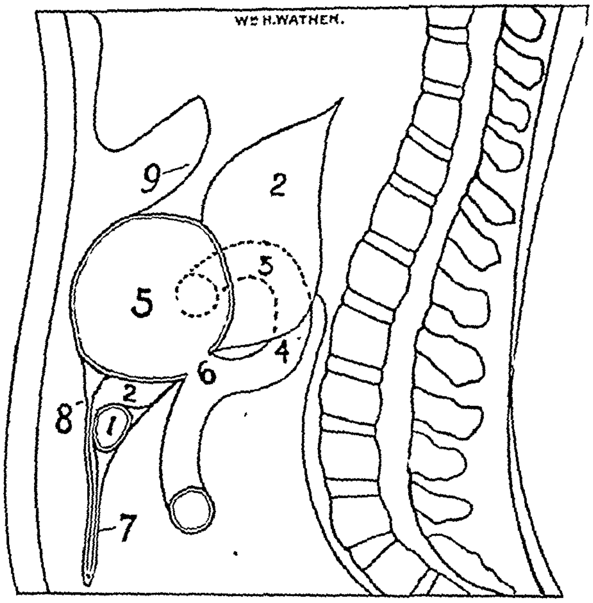

Fig 2.—1. Transverse colon. 2. Small peritoneal cavity. 3. Duodenum behind stomach 4. Beginning of jejunum 5. Stomach. 6. Gastrojejunal opening. 7. Great omentum. 8. Gastrocolic omentum 9. Gastrohepatic omentum.

While the Murphy button has done much in the evolution of gastric and intestinal surgery, it will not be generally used in the future except in selected cases. If the experience of Ochsner and of some other surgeons, show that equally good results may follow the use of the McGraw ligature, with an outer layer of sero-serous suture, this will be a great advantage over the stomach and intestinal incision, and the method would be generally adopted, for it reduces the operation to great simplicity. The McGraw ligature may be used as successfully in the posterior as in the anterior attachment, and its use practically removes all immediate danger from stomach and intestinal leakage, and the anastomosis may be made without the use of clamps. Let us then hope that the immediate and ultimate results with the ligature may be all that its advocates claim or wish.

The illustrations are intended approximately to show the relations of the stomach and jejunum before and after gastroenterostomy, with the elimination of the loop. The stomach and the anastomosed jejunum will lie evenly against the posterior wall of abdomen, and the forward position is an intentional exaggeration for better illustration.

The following twelve inquiries, referring to the most important and live question in gastroenterostomy, were mailed to five of the most representative men in stomach surgery in Europe, and five in the United States, and under each of the twelve headings I give the answers in the order in which they were received, making neither change nor comment, so that the reader may in no sense be influenced in his conclusions, as to the trend of thought in the best methods of stomach drainage into the jejunum.

1. *Where do you make the anastomosis?*

Robson: "Posterior wall of stomach to jejunum, 3 to 4 inches from duodenojejunal junction. My reason for performing the posterior operation is because I saw that the results of anterior gastroenterostomy, both in the hands of others and in my own experience, were not satisfactory, and regurgitant vomiting occurred at times, whereas, from the time I began to perform posterior gastroenterostomy, my results have been satisfactory."

Moynihan: "Opening high in jejunum, and oblique in posterior wall of the stomach, so that position of jejunum is the normal one, and the lowest part of the stomach is drained. A large opening is made."

Von Mickulicz: "It depends on the conditions in such cases. In cancer, where the entire organism is seriously affected, and the question of the operation is of considerable importance to the patient, we usually make the anterior anticolic gastroenterostomy with the Murphy button. Where the conditions are favorable, the suture is preferred; and in such cases the anterior gastroenterostomy is made with an entero-anastomosis to avoid the vicious circle, or the posterior gastroenterostomy is made. The latter will always be done when the conditions are favorable, provided the pyloroplastic operation, including the modification by Finney, is impossible."

Kocher: "Posterior inferior, as described in my text-book on surgical operations."

Czerny: "Posterior, because the parts remain after the operation in normal (physiologic) position."

Mayo: "Posterior, within an inch and a half of origin of jejunum."

Murphy: "I do the posterior gastroenterostomy, making the connection on the stomach wall about 3 inches to 3½ inches from the pylorus, and in the jejunum from 2 inches to 4 inches from the ligament of Trietze. This, I believe, gives the best drainage of the stomach when the stomach will have restored itself to its vertical position. The opening, however, is not in the most dependent portion of the stomach in the majority of cases at the time of operation, as there is so much gastrectasis and gastrocolitis that the curvature is much below its level. It rapidly assumes a vertical position, and this point becomes the most dependent position of the stomach. I use the straight loop of the jejunum at that point, because it is the natural resting place of the stomach on the jejunum, gives the best drainage and avoids dilatation which occurs in the jejunum when a loop is formed."

Ochsner: "At the present time I make the anastomosis at the, lowest point on the posterior surface of the stomach directly through the mesocolon, and start the tear to the posterior surface of the stomach. For a long time I made the anterior gastroenterostomy at the lowest point directly along the edge of the gastroepiploic vessels, leaving a loop of about 16 inches of jejunum."

Deaver: "With jejunum, 10 to 12 inches from its commencement (lower part posterior stomach wall)."

Park: "I prefer the posterior operation, although it is a little more difficult and time-consuming, because it seems to give better drainage and for obvious reasons. Of course, in the presence of indications to the contrary, I should make anterior operation, but only when the posterior did not seem practicable."

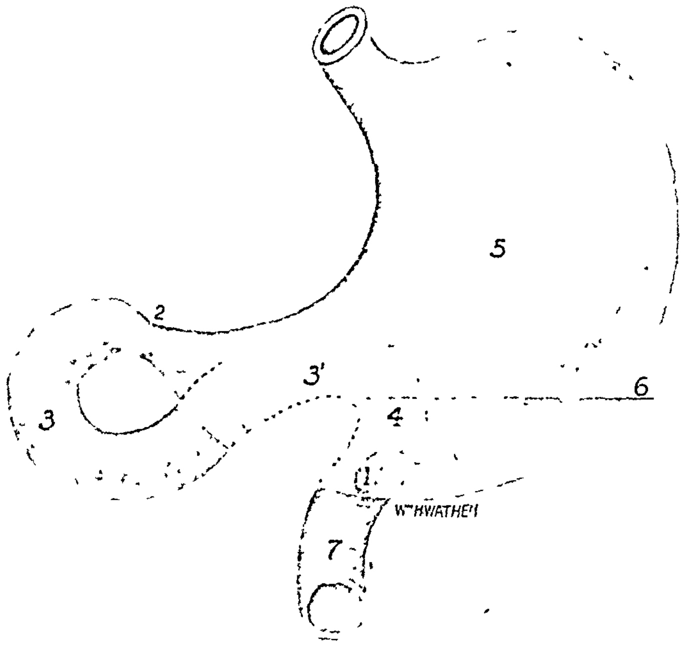

Fig. 3.—1. Gastrojejunal anastomosis and opening. 2. Pylorus Stomach. 6. Posterior attachment transverse mesocolon. 7. Jejunum below anastomosis.

2. Do you eliminate the loop, and how near the duodenojejunal junction do you make the attachment?

Robson: (1) I leave no loop of jejunum, but (2) make the attachment as near to the duodenojejunal junction as I conveniently can."

Moynihan: "Yes, entirely. Opening begins about 2½ inches below the flexure."

Von Mikulicz: "In anterior anticolic gastroenterostomy, about 50 cm. from the plica duodenojejunal junction is selected to make the anastomosis. It is made this length in order to avoid the compression of the transverse colon. By the posterior retrocolic method, the loop is made as short as possible *so that* no tension exists."

Kicher: "I used to make it as near as possible to the duodeno-jejunal junction a certain time, but found it less convenient than the older method *to put it at* a certain distance, that is to say, 30 or 40 centimeters."

Czerny: "I have no loop of intestine, because I take the jejunum only so far behind the pli[illegible] that it goes straight to the opening in the posterior face of the stomach near (1 or 2 cm.) the large curvature."

Mayo: "One and one-half inches (*no loop*)."

Murphy: "From 2 to 4 inches. I eliminate the loop entirely. The origin of the jejunum is above the level of the lesser curvature of the stomach."

Ochsner: "In gastroenterostomy for non-malignant conditions I make a loop of about six to eight inches from the duodenojejunal junction to the anastomosis. I do not eliminate the loop in these cases. In gastrectomy, if I have to remove more than two-thirds of the stomach, I always eliminate the loop by making an enterostomy in the following manner: I sever the jejunum about eight inches from the point where it passes through the mesocolon, and attach the distal end to the stomach and make a lateral implantation of the proximal end into the distal, about four or five inches from the point of the implantation of the latter into the stomach."

Deaver: "The anastomosis is made 10 to 12 inches below the jejunal flexure, giving a loop."

Park: "I endeavor to make the opening as near as possible to the pylorus in order to leave a minimum of loop, and to this I rarely pay any further attention. If the stomach be very much dilated or enlarged this may not be practicable, yet even then I have not paid much attention to the matter of loop."

3. If you have a loop, do you ever make an enteroanastomosis?

Robson: "In my early cases, when some loop was left, I have had to make an enteroanastomosis on one or two occasions, but these were only in anterior gastroenterostomies, except once, when there was intestinal obstruction, a few months after the operation, owing to adhesions between the distal loop of the jejunum and the colon."

Moynihan: "Have no loop, and therefore make no enteroanastomosis."

Von Mikulicz: "In cases where the gastroenterostomy is done with the suture in front of the colon, we add to it the enteroanastomosis. Where made with the button, this is usually not done, as the vicious circle does not usually occur in this method. If by the posterior gastroenterostomy a long loop must be made, the enteroanastomosis is also made."

Kocher: "No."

Czerny: "Never. Some years ago when I did not avoid so strongly the loop I was necessitated to make sometimes the enteroanastomosis secondary."

Mayo: "Abandoned."

Murphy: "I make no loop, nor have I done so for about three years."

Ochsner: "I have in a number of cases made an enteroanastomosis, but of late I have abandoned this plan and have substituted the implantation of the proximal end into the side of the distal segment. This is done where I do a partial gastrectomy."

Deaver: "Always."

Park: "I have not been in the habit of making enteroanastomosis, not having been able to convince myself that the conditions were materially improved by making it."

4. If you have a loop, do you ever close or divide the proximal limb, or the pylorus?

Robson: "I have never found it necessary to close the pylorus, and only twice performed a Raux operation—once where there were extensive adhesions, and where there was a jejunal ulcer. Both cases were anterior gastroenterostomies."

Moynihan: "No."

Von Mikulicz: "No."

Kocher: "No."

Czerny: "I have no loop, and therefore closure of the pylorus or enteroanastomosis is not necessary."

Mayo: "Abandoned."

Murphy: "I make no loop."

Ochsner: "At the present time I do not close the pylorus, nor do I close the proximal limb."

Deaver: "I have closed the pylorus in two cases; good results."

Park: "No."

5. How long is the incision, and in what direction do you incise the stomach and intestines, and do you remove any of the underlying mucous coat?

Robson. "I make an incision into the stomach parallel with the lower border. The oblique incision is quite unnecessary. The intestinal incision is longitudinal. About two inches is the usual length of the visceral incision. I do not remove mucous membrane of the stomach or jejunum, as a rule. I think the stomach will drain as well if the incision be made parallel with the lower border as by the oblique incision. The great secret is to attach the bowel correctly with the least possible manipulation and the least interruption to continuity."

Moynihan: "Oblique in stomach, longitudinal in intestine, opening at least 2 inches in length, nearly always more. Removal of mucosa was first adopted by me (see 'Diseases of Stomach,' edition 1, p 273). It was suggested to me by the 'stamping out' of the Murphy button."

Von Mikulicz: "The cut is usually made in the stomach and bowel in a longitudinal direction, and is from 3½ to 4½ cm. long. The underlying mucous coat is not cut out."

Kocher: 'I make a transverse incision in the intestine, half circumference, and for the stomach a longitudinal incision of corresponding length."

Czerny: "Only 2 or 3 cm. so long as to introduce the button. For the button it is equal if the incision is made longitudinally or transversely. For the suture I prefer a longitudinal incision 4 to 5 cm."

Mayo: "Two and one-half to 3 inches, oblique above down left to right, and always go to bottom stomach and a little on to the anterior surface below."

Murphy "I make the incision long enough to admit of the insertion of an oblong button, which is about five eighths of an inch. I do not remove the mucosa, as I feel that the pressure from the button assures one against hemorrhage from the cut mucous membrane, which is an important factor, as this has caused more than one death."

Ochsner. "At the present time I use the McGraw ligature, making the bite of this 7.5 cm. in length. This causes the mucous coat to become necrotic, which corresponds to cutting it away In resection of the stomach I make an implantation of the distal segment of the jejunum, and an end to side anastomosis"

Deaver "Usually make incision three inches in long axis of stomach, and remove the projecting mucous membrane flush with the serous and muscular coats."

Park: "I make the opening some 3 inches in length and remove quite a strip of mucosa. The incision in the bowel is, of course, longitudinal, that in the stomach I place, so far as I can, between large vessels, although not hesitating to make this parallel with the greater curvature and cross the vessels when it seems easier, quicker or more adapted for the purpose"

6. Do you use the button or the suture?

Robson: "I employ two continuous sutures: (1) mucous, (2) serous, usually around a decalcified bone bobbin, that dissolves under forty eight hours I sometimes omit the bobbin, but my results with it have been so satisfactory, and the recoveries so smooth that I think the immediately patent opening is of service, and enables feeding to take place immediately. I do not use the metal button"

Moynihan· "The suture always It is almost as speedy—the suture line never yields—the button does The opening by suture can be made any size, proportioned to size of stomach The operation when completed leaves nothing behind to cause further disaster. With regard to time, I have recently completed a gastroenterostomy from incision to final suture in abdominal wall in exactly fifteen minutes in a desperate case"

Von Mikulicz: "We believe the thread is the ideal and safest way, but often, on account of the poor condition of the patient. and in cases of cancer where the question of time (an operation of 10 minutes) is of great importance, we usually use the button In favorable instances, the suture" (Compare this answer with the previous questions)

Kocher: "Suture, as a rule; button more frequently these last months, because it is so simple."

Czerny: "I use the Murphy button; very seldom the suture, because the operation is much quicker, the danger of infecting the peritoneum from the contents of the intestines less. But I agree that the button will not remain the best method, because it passes sometimes, about 5 per cent., in the stomach, and the passage through the intestine is sometimes difficult, and the anastomosis properly in the thickened hypertrophied stomach is too narrow."

(Czerny usually puts a ring of sutures around the button to give additional protection.—W. H. W.)

Mayo: "Suture, button goes into stomach."

Murphy: "I use the button all the time, because I believe it gives the best scar. There is less likelihood of leakage when properly made and properly inserted, and the oblong button has not been retained in the stomach in a single instance."

Ochsner: "I use a needle and thread, because in two cases the button tore out and I had a fatal result, while in using the needle and thread I have not had this difficulty."

Deaver: "Always needle and thread for the gastroenterostomy; the button for enteroenterostomy Never use clamps."

Park: "I have so far always used sutures, believing that I can do better work with them, even though a little more time is consumed."

7. Do you have a vicious circle or regurgitant vomiting?

Robson: "No"

Moynihan: "At first I did. I re operated twice in my first fifty cases. Now never occurs. Patients vomit less after gastroenterostomy than after any admonial operation, probably because in efforts of vomiting the new opening affords the easiest escape from stomach. Patients should be propped up in bed as soon as they are aroused from the anesthetic. Five pillows or bed-rest. This is a point I have always emphasized and have adopted for over five years. It helps to keep stomach and jejunum in their proper relative position '

Von Mikulicz: "In the last few years we have seldom had the vicious circle in using either the button or the suture, since we added to the gastroenterostomy the enteroanastomosis. In spite of this fact, we had in the last year two cases of vicious circle—one by the anterior gastroenterostomy with the button, and the second time by the posterior operation with the loop"

Kocher: "As a great exception in nervous people, and in cases where the indication was not absolute, have had regurgitant vomiting."

Czerny: "Never, or nearly never. Vomiting has been stopped by one or two introductions of stomach tube."

Mayo: "No, unless we have a loop."

Murphy: "I have only had one case of vicious circle. I have had two cases of regurgitant vomiting."

Ochsner· "Since choosing the lowest portion of the stomach, I have had no vicious circle or regurgitant vomiting. When I made the enterogastroenterostomy without choosing the lowest point of the stomach, I frequently had this trouble."

Deaver: "No."

Park: "I have so far had no evidences of vicious circle or regurgitant vomiting, although, as I have remarked above, I rarely, if ever, do anything but the simple gastroenterostomy."

8. Have your ultimate results been good?

Robson: "Yes."

Moynihan: "Yes; I have had but six unsatisfactory cases in approximately 180 cases."

Von Mikulicz: "As far as the functional results and the length of life after the operation are concerned, compare the work of W. Kausch on functional results after operations on the stomach in favorable cases. Extracts from an article in the *Journal of Medicine and Surgery*, vol. iv, 1899. Chumsky —Additional observations on gastroenterostomy in the *Journal of Clinical Surgery.*'

Kocher: "Very good."

Czerny: "Very good (Vide Pedersen, 215 gastroenterostomies with 5 per cent. mortality from all causes in benign cases, with no serious vomiting and no obstruction)."

Mayo: "Yes."

Murphy: "The ultimate results have been good. I feel that sufficient attention has not been paid to the direction of diet immediately after the gastroenterostomy."

Ochsner: "My ultimate results have been satisfactory so far as I have been able to review my cases, but I have been compelled to reoperate in about 4 per cent. of my cases."

Deaver: "Yes."

Park: "Excellent."

9. Have you had closure of the gastrojejunal opening?

Robson: "No."

Moynihan: "No. I have reopened abdomen about four times for other conditions, and opening has always been patent, even when pylorus is open. Closure of opening is due, I think, to improper technic. It is avoided by large opening, removal of mucosa and through-and-through suture, securing apposition of mucosal edge."

Von Mikulicz: "No."

Kocher: "No."

Czerny: "I guess one or two times in postmortem for cancer cases, or in cases where the functional use of the anastomosis has been of little importance. (Vide Pedersen.))"

Mayo: "Yes."

Murphy: "No."

Ochsner: "After using the Murphy button, I had a number of cases in which the gastrojejunic opening closed down to less than one-half cm. Since using the McGraw ligature I have not had this experience."

Deaver: "No."

Park: "Not to my knowledge, although one of my old cases has just come under my observation in which it is possible that the opening has become contracted."

10. What has been your mortality, both past and recent?

Robson: "My total mortality in posterior gastroenterostomy (close on 200) including both malignant and simple cases, the latter including hour-glass stomach and acute gastritis, has been 4 per cent. In my private practice there were 77 simple cases with two deaths, 2.62 per cent., one patient operated on for acute gastritis and incessant vomiting. There was no vomiting after operation and the wound healed, but the patient died subsequently of exhaustion; and one operated on at a distance, and after attention conducted by an inexperienced practitioner who starved patient, previously exhausted. Death occurred from asthenia in two weeks. There were 15 cancer cases, with one death. Total, 92 cases, 3 deaths, 3.2 per cent."

Moynihan: "Including cases just left hospital, 191 cases, 5 deaths, 2.63 per cent. In these were three deaths in 27 patients operated on for hemorrhage, when the patient's condition was somewhat desperate."

Von Mikulicz: "Of 210 patients operated on for carcinoma of the stomach in the years 1890 to 1904, 69 died—that would be a mortality of 32.85 per cent. In the favorable cases from 1891 to 1897, the mortality was 16.2 per cent. In the operative cases from 1897 to 1899, 23 patients were operated on, one died; mortality 4.35 per cent. The statistics of the patients operated on in the last years have not been compiled."

Kocher: "I am now gathering all my cases, so I can not at this moment give you my exact results. I might in October. The earlier results are given in my text-book, 1903 (100 cases, 3 deaths. neither referable to the operation, but to the disease itself)."

Czerny: "Vide No. 8."

Mayo: "Over 400; past, 6 per cent.; present, less than 3 per cent. in 150 cases. Have recently made 53 gastroenterostomies in succession without a death."

Murphy: "Last year one death. I have not gone over my cases recently, and am not in a position to do so at present."

Ochsner: "The mortality in cases in which the operation was performed for relief of pyloric obstruction due to malignant growths has depended largely on the condition of the patient at the time of the operation. It is approximately 12 per cent. In non-malignant cases it is approximately 4 per cent. I have performed the operation 143 times."

Deaver: "This I can not answer off hand; would require my going over all records. I have never lost but one case of gastroenterostomy out of a large number for benign condition. The mortality in malignant cases has been about 10 per cent."

Park: "I have had about 25 cases. The number may be a little larger or a little smaller; I have not time to look over my records. Among these cases there have been two deaths. I have not heard of the death of any patient since the operation who survived the procedure itself."

11. Have you ever had the anastomosis become detached after using suture or button?

Robson: "Yes, after using the Murphy button in anterior gastroenterostomy; never in the posterior operation."

Moynihan: "Have only used button in early cases, about six. Suture line has never given any trouble."

Von Mikulicz: "A complete parting never. Partial insufficiency in rare cases has occurred both with the suture and the button."

Kocher: "No."

Czerny: "As much as I remember, never, but in few cases the postmortem showed an infection by secondary necrotic dehiscence of the adhesions."

Mayo: "Yes; button must be protected by a few sutures if used."

Murphy: "No."

Ochsner: "The anastomosis in my experience has never been detached in using the McGraw ligature, but it has become detached twice in using the button."

Deaver: "No."

Park: "I have not had any detachment of anastomosis myself, but have seen one or two cases where it has occurred with the button in the practice of others."

12. Do you believe that the passage of bile and pancreatic secretion into the stomach causes regurgitant vomiting?

Robson: "No, if the passage out of the stomach is free and the intestine is not obstructed."

Moynihan: "No. In one case of mine, all bile and pancreatic juice passed into the stomach for weeks and no vomiting ensued. See *Brit. Med. Jour.*, May, 1901."

Von Mikulicz: "No."

Kocher: "Yes, in nervous people."

Czerny: "The anastomosis causes sometimes (in very rare cases) a bitter sensation of bile in the morning, which causes nausea. About regurgitation I have no experience."

Mayo: "Yes."

Murphy: "I think it might, but I doubt if it does."

Ochsner: "I believe that regurgitant vomiting is caused by the fact that in some cases the opening in the stomach is not at the lowest point, and that in this way bile and pancreatic fluid will run into the stomach and can be evacuated into the jejunum only with difficulty. In the other cases, the attachment of the jejunum to the stomach may be such as to make the passage of bile and pancreatic juice easier into the stomach than into the lumen, because of angulation or narrowing of the lumen or obstruction due to some form of torsion."

Deaver: "Yes."

Park: "I have no good reason for thinking so, at least from my own experience."

CONCLUSIONS.

1. Some cases of acute and subacute gastric and duodenal ulcer, and many cases of chronic and duodenal ulcer, should be treated by efficient stomach drainage into the duodenum or jejunum.

2. Drainage by pyloric divulsion, and by pyloroplasty with its modifications, has not been successful, and these methods are now practically obsolete.

3. Gastroduodenostomy as modified by Kocher and Finney, may give efficient drainage in many cases, but

it should be limited to such patients as can not be operated on by a posterior retrocolic gastroenterostomy with the anastomosis near the duodenojejunal flexure.

4. Anterior anticolic gastroenterostomy should not be an operation of election, but an operation of expediency and necessity, to give temporary relief, or to meet special abnormal conditions that may contraindicate the posterior attachment.

5. The ideal operation of election must be the posterior retrocolic attachment near the beginning of the jejunum, and at the bottom of the stomach in the pyloric end, thus eliminating the loop.

6. This gives the most efficient drainage, prevents the vicious circle and regurgitant vomiting, leaves stomach and intestine in nearly normal relation, and is followed by better immediate and ultimate results.

7. The intestinal incision should be made longitudinally and not less than two inches long, and the stomach incision of corresponding length, preferably in the oblique direction. An elliptical strip of mucosa should be excised from both stomach and intestinal incision.

8. The anastomosis is best made with *a continuous* suture (Pagenstecher or silk) using a full curved round-pointed needle. The suture should be applied in double layers, the inner to include all the visceral layers, and unite the cut edges of the opening; the outer, one-fifth inch away, to include the serous and sub-serous layers.

9. Enteroenterostomy, or closure by suture constriction or resection of the proximal jejunum or the pylorus is contraindicated. It commits an unnecessary traumatism and leaves a deformity that may cause immediate and subsequent bad results.

THE SURGICAL IMPORTANCE OF THE CERVICAL RIB.

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While the supernumerary ribs of the lumbar vertebræ possess an academic interest only, the accessory rib of the cervical portion of the spinal column commands practical importance. Literature does not contain a single case in which the lumbar rib has caused any discomfort whatsoever. In contrast hereto the observations concerning more or less great disturbances, due to cervical rib, are multiplying with each year. The Roentgen ray has enabled us to obtain more accurate anatomic knowledge of this region and has also given us a means to determine the accuracy of surgical procedures. We have learned to use the Roentgen picture as a reliable guide in outlining the plan of operation.

Naturally it was the anatomists who gave us the etiology at a period when we did not as yet value the clinical importance of the cervical rib. As the pioneer in this direction we may consider Hunauld.[1] Later, Gruber was able to demonstrate 76 cases on 45 bodies, and 2 in the living.

Pilling[2] mentions 129 cases, but these were mostly all observed in the dead body.

Gruber differentiated the different grades of the anomaly according to their several stages of development. On the basis of his viewpoint we may divide the different types as follows: (*a*) Slight degree: The cervical rib reaches beyond the transverse process. (*b*) More advanced: The cervical rib reaches beyond the transverse process, either with a free end or touching the first rib. (*c*) Almost complete: The connection between the cartilage of the first rib is formed either by means of a distinct band or by the end of its long body. (*d*) Complete: It has become a true rib and possesses a true cartilage, which unites with the cartilage of the first rib.

In general, we can assume that the cervical rib is double in 67 per cent., and single in only 33 per cent. of all cases. A completely developed cervical rib on both sides is to be regarded as rare. One such case is described in the monograph of Pilling.

An additional rib which runs from the sixth cervical vertebra is to be regarded as a very rare condition. With the exception of the case to be described, I have found this anomaly observed twice only in literature.

It is significant for the difficulties of the diagnosis that naturally presented themselves before the Roentgen era, that by far the most of the reports speak of accidental discovery at autopsy. Consequently, if no marked disturbance was caused, the possessor of the cervical rib undoubtedly took his "special marks of identification" with him, unknown, to his grave.

Although this anomaly is of congenital origin, the complaint does not make itself felt until about the twentieth year, a fact which is hard to explain.

From most reports, we learn that by far the greater number of patients had passed the age of twenty years—a few patients had even reached the age of 55 years. In a number of cases, it was possible to refer to trauma as a precursor of the complaint, in others the presence of constitutional diseases such as anemia, chlorosis, rheumatism, scrofula or even tuberculosis was observed.

Whether the loss of fat causing a diminution of padding in these diseases is the reason for the greater manifestation of the discomfort, must remain to be seen. At any rate, special circumstances, the nature of which is still unknown to us, must form important factors in the maturing of the disease; besides, it is to be assumed that the tissues adapt themselves to the rib during the period of development, and that no discomfort arises where a certain amount of elasticity or of a yielding tendency exists; thus the age of the patient is valueless from a diagnostic point of view.

Before the Roentgen era, it might have been thought that in cases of symptoms referable to this region the possibility of some such anomaly might have been considered, but in most cases, other conditions, especially tumors of all kinds, were thought of rather than cervical rib.

Tilmann,[3] who has gained special credit in the investigation of these cases, could collect only 26 cases among the living, and of these one-half were discovered accidentally. There can not be the least doubt that the actual number of cases is by far a much greater one. In the future this will have to be proved by the Roentgen rays.

This difficulty of diagnosis is brought forward in the splendid monograph of Kammerer,[4] a treatise which deserves recognition and imitation for its brave self-criticism. Although in his case, the possibility of a cervical rib as the cause of the swelling had been thought of, the natural tendency seemed to be to consider it as an exostosis. The pressure symptoms disappeared in this case after removal of the rib.

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[1] Sur le nombre des côtes moindres ou plus grands qu' à l'ordinaire, Mém. de l'Académie Royale des Sciences de Paris, 1743.

[2] Ueber die Halsrippen des Menschen, Inaug. Dis., Rostock, 1894.

[3] Deutsche Zeits. f. Chir., vol. xii.

[4] Annals of Surg., November, 1901.

The principal symptoms of the anomaly are the hump-like prominence in the lateral cervical region, the superficial pulsation of the subclavian artery and the *appearance of pressure symptoms in the brachial plexus.*

Prickling and lancinating pains in the arm, general loss of flesh and especially atrophy of the muscles supplied by the median nerve, numbness and diminished compressive power of the hand of the affected side, a feeling of cold, and pains in the neck on stretching it have also been observed. At times it goes so far as to form an aneurism of the subclavian artery.[5]

A striking fact is that even after a diagnosis has been made the attempt is often made to master the trouble by internal means. But as soon as the physician becomes familiar with the anatomy of the cervical rib, he must acknowledge that he has to deal with a disturbance placed in the way of the normal blood and nerve paths, which has attained the prowess of a foreign body. Thus the treatment for the difficulties arising therefrom can only be a mechanical one, i. e., surgical, massage, electricity, hot and cold packing, etc., can be of only temporary benefit and possess the disadvantage that much valuable time is wasted. Thus the disturbance may become permanent.

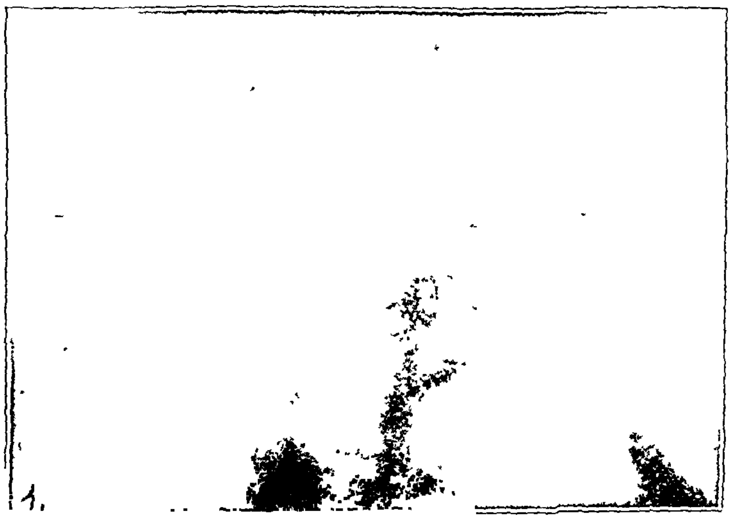

Figure 1.

A radical cure can be effected *only by the removal* of the cause of pressure, that is of the rib itself.

It is just as foolish to remove a cervical rib which causes no disturbance as it is to leave one that does until lasting tissue changes have been brought about. The operative measure, *if timely,* removes all discomfort at once.

At times the technic for the removal of the rib is very simple. In the majority of cases, however, one encounters difficulties, and, therefore, the operation should be done only by an experienced surgeon. The difficulty of the removal is *magnified* by the fact that it is necessary to remove the periosteum with the rib, for if *the much* easier subperiosteal removal is undertaken a recurrence due to the regeneration of the bone must be expected.

The field of operation grazes the lower two cervical nerves, the upper dorsal nerve and the lower cervical ganglion of the sympathetic. Furthermore, it touches on the large vessels and on the pleura, the latter being especially thin here and very easily wounded. Of course the adhesions formed between the parietal and visceral pleura in most of these cases give a certain amount of protection against the development of a pneumothorax, if an injury be caused. In a case of Planet[6] it seems to have been impossible to avoid injuring the pleura, so that a pneumothorax was caused, but without any grave disturbance.

The extirpation of small rudiments whose ends do not reach the subclavian artery, is naturally simple. When we have to deal with a fully developed rib the various *steps of the operation* must be so carried out that the *artery is avoided from the beginning.*

Some operators place their incision along the posterior border of the sternomastoid, while others advise a longitudinal incision between the trapezius and the jugular vein.

I find that a triangular flap incision, running directly downward along the trapezius and then conducted toward the sternum about one inch above the clavicle, fully exposes the field of operation. If the trapezius can not be sufficiently retracted with broad retractors, a transverse incision must be made into the muscle, for next to a strict asepsis the success of the operation depends on extensive exposure of the field of operation.

The brachial plexus, which usually runs across the rib, can also be pushed aside. The subclavian artery is best pulled forward. The scaleni are carefully divided at their point of insertion, and this is best done by *using a Cooper shears and, advancing layer by layer,* lifting the several muscle fibers with the flat of the scissors and using the instrument as one would use a grooved director. By means of a ring-shaped periosteotome the rib is then freed of any small muscular appendages. The division can easily be accomplished by means of my beak-shaped rib-shears. Some prefer the *Gigli saw.* Any remains are nipped off *with the rongeur forceps.*

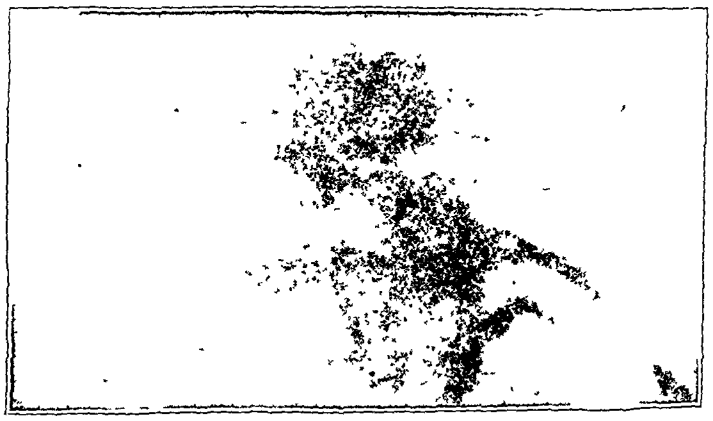

Figure 2.

The following case is of interest from several points of view.

Patient.—A young woman, aged 21, delicate, anemic and of small stature.

Family History.—Both parents are alive. The mother is also small and delicate, but well. As a child she lost an eye through trauma. *Father has suffered* from interstitial nephritis during the last few years.

History.—The patient had measles and scarlet fever when a child. One year ago, after a fall, she began to suffer with pain in the right side of the neck. This was regarded and treated as *rheumatic.* Two months later the pains began to extend into the arm and were accompanied by prickling and numbness of the fingers. She was then treated in the department for nervous diseases of the *German Poliklinik* and referred from there to me. My assistant, Dr. Heckmann, diagnosticated a slight bulging of the right side of the neck and a corresponding osseous tumor which could be traced from the spinal column to the neighborhood of the sternoclavicular joint. Pulsation was marked. After Dr. Heckmann had confirmed his diagnosis of accessory cervical rib by means of the Roentgen plate (Fig. 1) he exposed the anterior portion of the rib by means of an incision running along the posterior border of the sternomastoid muscle. He found both the brachial plexus and the subclavian artery passing over it. After the resection of this portion the plexus as well as the artery dropped back into the newly formed cavity. As the cause of the pressure had been removed it was decided to let the posterior remnant of the rib take care of itself. The symptoms of complaint gradually disappeared, but returned with undiminished vehemence three months later.

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[5] Wiltshire, Lancet, p. 633, London, 1860, and Boyd, Internat. Med. Mag., 1893.

[6] Tumeurs osseuses du cou, Thèse de Paris, 1890

Examination.—When I examined the patient I could find neither prominence nor pulsation. The pulse of the axillary, brachial and radical arteries, however, was diminished in tension. The reaction to electricty of muscles and nerves was also diminished. Sensation was normal. Patient was extremely anemic and complained of pains in the neck and right arm and of numbness of the fingers. On stretching the neck the pains were intensified. The power of compression of the right hand was diminished.

The Roentgen picture—extreme lateral position of head during exposure—(Fig. 2) shows on the right side the presence of a fair-sized costal stump running from the seventh cervical vertebra, while the left side shows a small rudiment. The sixth cervical vertebra shows a rudiment on both sides.

Operation.—In view of the vehemence of the symptoms, especially of the pains, I decided to reopen the field of operation for the purpose of removing the remainder of the rib. Advancing carefully, layer by layer, into the deeper tissues, I neither came in contact with the brachial plexus nor with the artery. It was rather difficult to separate the muscle from the edges of the rib. Most of the separating was done bluntly with the aid of the Cooper scissors, using them as a support. The extirpated fragment of the rib measured 4 cm. As the previous resection had been done subperiosteally a new formation of bone of more than one cm. in length had attached itself to the stump of the rib. Hence it becomes evident how necessary it is always to remove the periosteum with the rib. The rib, on the whole, was narrow, thickened at its vertebral attachment and presented a small groove on either side.

Recovery was uneventful. The symptoms disappeared entirely shortly after the operation. Two months later slight symptoms of pain made themselves felt in the neck on the right side, but these also disappeared after the use of the *galvanic current.*

BLOODLESS REPOSITION OF THE CONGENITALLY DISLOCATED HIP JOINT VERSUS ARTHROTOMY.

WITH STATISTICS OF 34 CASES OPERATED ON BY DR. LORENZ DURING HIS VISIT TO THE UNITED STATES IN 1902.

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A dispute which appears to be settled, at least so far as the competent authorities in Germany, France and Italy are concerned, seems to have been resurrected in America in recent days. The question is whether the open operation or the bloodless reposition of the congenital dislocation of the hip joint should dominate the future therapy of this deformity.

One of Sherman's later publications[1] is so much in favor of the open operation that it seems quite justifiable to compare these methods of treatment critically without any prejudice.

In this connection I quote the historical fact that the originator of the bloodless method, Prof. A. Lorenz of Vienna, had the largest record (about 200 cases) of open operations just at the very time when he began to develop the bloodless method, which he considers the only and the most suitable treatment. Prof. A. Hoffa of Berlin, whom we may call the most prominent pioneer in the development of the open method, recommends in all cases at first the attempt to reduce the congenitally dislocated hip, leaving for the open operations only *those cases in which the* bloodless method failed.

Among American surgeons it must be admitted that some uncertainty about the advisability of the new method has developed, because of the many accidents which have been observed; but to be just we must frankly state that for those accidents and mischief the method can not be held responsible. They occurred mostly in unsuitable cases and were due to rough maneuvers or to other mistakes in technic.

The great importance of the first mentioned point may readily be seen in the many cases scattered between Boston and San Francisco on which Lorenz operated. Not half of those cases were pronounced by Lorenz as favorable, either because of the advanced age of the patients or because they had been operated on before without success either by arthrotomy or by reposition. Knowing how small a chance for success he would have, and emphasizing this fact, he nevertheless was obliged to operate on these patients, as these cases were often the only ones which could be secured for his clinical work.

In a great many cases his refusal to operate would have resulted in great disappointment to many physicians and students who wished to witness the single steps of the operation. In one large eastern city with a population of nearly a million, not a single half-way suitable case was among those that were prepared for him; he was not loath to cancel the clinic altogether, and only the consideration of the crowded amphitheater, as well as regard for his host, induced him to do his best in spite of the very unfavorable circumstances.

That under these conditions the method could not show its best results and could not be expected to give the claimed 50 per cent. of anatomic cures is an evident matter of fact.

The few cases which Lorenz pronounced favorable could not give the best results possible, as the very important after-treatment was administered by the various surgeons under whose care the patients were left in various ways and after different principles. This fact, although deplorable, was unavoidable, as with the exception of the few pages which Lorenz[2] devoted to this chapter in his book nothing existed dealing with these very important features of the treatment. Many new details have been added to this chapter, and simple comparison of the after-treatment as outlined by Lorenz in his book in 1900, and given by me in 1904 and 1905,[3] shows this fact very clearly. Those details explain why the majority of the cases operated on by Lorenz can not be regarded as giving average results or as being fitted for drawing figures for statistics. That among Lorenz' cases, however, a good many first-class results have been secured I am able to prove by the following statistics:

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[1] Sherman: Congenital Dislocation of the Hip. The Journal A. M. A., Jan. 7, 1905.

[2] Lorenz: Ueber die Heilung der angeborenen Hüftgelenksverrenkung durch unblutige Einrenkung. Wien, 1900.

[3] Mueller and Ashley: Treatment Following the Bloodless Reduction of Congenital Hip Dislocation. New York Medical Journal. A series of four articles, beginning May, 1904, ending January, 1905.

Total number of cases operated on by A. Lorenz and left under my care, 34.

Cases suitable for statistics, 32.

Anatomic repositions, 21 (Table A).

Subspinal positions, with excellent functional result, 11 (Tables A, B and C).

TABLE A—ANATOMIC RESULTS.

No.	Name.	Age in Years.	Side.	Date of Operation.	Gait. (1905)	Motion. (1905)	Notes.
1	L. Th.	3½	L.	Oct. 18, 1902.	Normal.	Full.	February 19, 1903, depression of the head, which stood in suprapubical position.
2-3	B. M.	4	L. & R.	Nov. 24, 1902.	Normal.	Full.	April 25, 1903, removal of the cast; after-treatment.
4-5	E. L.	4	L. & R.	Oct. 24, 1902.	Normal.	Full.	June 24, 1903, depression (as in Case No. 1). August 29, 1903, third cast; February 5, 1904, after treatment.
6	M. W.	4½	L.	Oct. 18, 1902.	Good.	Full.	April 20, 1903, after-treatment; Feb. 15, '05, some outward rotation still exists.
F	B. E.	4½	L.	Oct. 15, 1902.	Stiff.	Limited.	March 15, 1904, forcible correction of the abducted position; parents discontinued treatment.
8	S. L.	4½	L.	Oct. 22, 1902.	Normal.	Full.	July 6, 1903, after-treatment.
9-10	K. B.	5	L. & R.	Oct. 16, 1902.	Good.	Limited on left side.	May 20, 1903, depression on the right side (as in Case No. 1).
11	L. R.	5	L.	Nov. 12, 1902.	Normal.	Full.	December 12, 1903, depression (as in Case No. 1).
12	D. A.	5½	L.	Oct. 22, 1902.	Normal.	*Full.*	Operated on without success by Dr. J. Ridlon, 3 years ago. April 23, 1903, after-treatment. August, '04, died from typhoid fever.
13	A. L.	6	R.	Oct. 10, 1902.	Somewhat stiff.	Somewhat limited	Operated on without success by Dr. J. Ridlon, 2 years ago. April 19, 1903, second cast. July 2, 1903, after-treatment.
14	W. M.	6½	L.	Oct. 17, 1902.	Normal.	Full.	April 18, 1903, after-treatment.
15	N. H.	7	L.	Oct. 24, 1902.	Good.	Full.	Operated on without success by Dr. J. Ridlon, 2 years ago. April 19, 1903, after-treatment leg somewhat rotated outwards.
16	L. E.	7½	L.	Oct. 12, 1902.	Normal.	Full.	Operated on without success by Dr. J. Ridlon, 3 years ago. May 29, 1903, depression (as in Case No. 1). August, 1903, after-treatment.
17	B. Ph.	8	L.	Oct. 16, 1902.	Normal.	Nearly full.	April 27, 1903, after-treatment.
18	E. S.	8½	L.	Oct. 12, 1902.	Normal.	Full.	May 18, 1903, depression (as in Case No. 1). August 18, 1903, after-treatment.
19	H. R.	8½	L.	Oct. 22, 1902.	Normal.	Full.	May 19, 1903, after-treat*ment.*
20	L. T.	8½	L.	Oct. 18, 1902.	Stiff.	Limited.	January 14, 1904, and February 9, 1905, correction of the abducted position in narcosis.
21	K. M.	9½	L.	Nov. 2, 1902.	Normal.	Full.	June 8, 1903, *after-treat*ment.

As the cases contained in Table C must be excluded, the proportion of the anatomic repositions to the subspinal positions stands 21 to 11. Although more than two years have elapsed since the time of the operations, the treatment of all cases can not be considered as finished. This is shown by Cases 7, 13 and 20 of Table A, where some stiffness and limitation of the motion of the hip joint is still present. Under suitable treatment all these cases are improving, so that for each one a perfect motion (continued care provided) may be predicted. Even in case we subtract for the present time Cases 7, 13 and 20 from the perfect anatomic cures, the proportion stands 18 to 14. That means about 50 per cent. of anatomic cures with absolutely normal gait.

Among the 21 anatomic results, depression of the head, which stood in a suprapubical position, was necessary in six cases. All cases thus treated gave beautiful results.

That many of the patients operated on unsuccessfully before are among these cases, and that many of them were *near* or beyond the age limits can be seen from the statistics, but so much the more must we be satisfied with the fact that over 50 per cent. of anatomic results and no relapses have been obtained. The reported relapse in Case 1, Table C, is certainly due to the unsuitable maneuvers while the second cast was put on.

TABLE B—SUBSPINAL POSITIONS.
ANTERIOR SUPERIOR REDISLOCATIONS.

No.	Name.	Age in Years.	Side.	Date of Operation.	Gait. (1905)	Motion. (1905)	Notes.
1	B. L.	3	R.	Oct. 16, 1902.	Good.	Full.	April 27, 1903, after-*treatment.*
2	T. H.	3	R.	Oct. 31, 1902.	Nearly normal.	Full.	June 5, 1903, after-treatment.
3	M. M.	3		Oct. 17, 1902.	Good.	Full.	*April 18, 1903, after-treatment.*
4	B. T.	3½	L.	Oct. 12, 1902.	*Good.*	*Full.*	*May 15, 1903, after-treat*ment.
5	V. T.	4	L.	Oct. 21, 1902.	Good.	Full.	April 25, 1903, after-treatment.
6	L. M.	4	L.	Oct. 15, 1902.	Nearly normal.	Full.	April 18, 1903, after-treatment.
7-8	S. M.	6½	L. & R.	Nov. 22, 1902.	Good.	Full.	September 10, 1903, second cast; August 14, 1903, third cast; March 15, 1904, after-treatment.
9	L. G.	7	L.	Oct. 18, 1902.	Somewhat stiff.	Full.	April 29, 1903, after-treatment.
10	E. N.	5	L.	Oct. 29, 1902.	......	......	Although both children walked well the parents were determined to have the attempt made of changing the subspinal position into an anatomic position. In both cases the secondary operation was successful. Further particulars about this new improvement will be published later.
11	A. G.	5	L.	Oct. 18, 1902.			

TABLE C—MISCELLANEOUS CASES.

No.	Name.	Age in Years.	Side.	Date of Operation.	Gait. (1905)	Motion. (1905)	Notes.
1	G. E.	10	L.	Oct. 14, 1902.	....	....	During March 1903, a correction of the abducted position was made and a cast was applied by a Chicago surgeon; this manipulation probably led to a relapse. *June 17,* 1903, this cast was removed and a relapse was apparent.
2	E. McL.	4½	L.	Oct. 20, 1902.	....	....	June 18, 1903, removal of the case, depression of the head (as in Case No. 1) proposed, but declined by the parents.

It can not be repeated often enough that in order to show the full efficiency of the bloodless method it is necessary to keep strictly within the age limits. It can not be expected that a method for which such limits exist will give the best results in cases which have passed this limit, although the operation itself, that is, the reposition of the head of the femur into the socket, might be accomplished in a great many cases that are beyond that limit. The age limit—about 7 years for unilateral cases, and 4 or 5 years for bilateral cases—are too well known to need further discussion. Within these limits it must be considered a great rarity when the bloodless manipulations do not give the wished-for reposition; but such exceptions occur. Sherman's case of the 10-month-old baby in which he found the entrance to the cavity of the socket exceedingly narrow, may belong to this group; I had a similar experience four months ago in a case of a double dislocation—a girl of 3 years—in which I secured an anatomic result on the left side and two attempts to reduce the right side failed. although each attempt lasted more than one and one-half hours. Other orthopedic surgeons undoubtedly will have similar experiences.

The obstacle in such cases is the narrowed part of the capsule, which in some publications is called the "hourglass-shaped constriction of the capsule" (*Sanduhrförmige Einschnürung der Kapsel*), and in others, "the entrance to the pocket-shaped recessus of the socket" (*Eingang zur Pfannentasche*).

It always has been evident for every one who ever performed or witnessed an arthrotomy, or an open reposition. that a disproportion exists between the head of the dislocated femur and this narrowed part of the capsule. through which the head has to be introduced into the socket. All authors are familiar with this fact. This narrowed space, however, within the age limits of the bloodless operation with the exception of a very few cases, is always large enough to allow the passing of the head of the dislocated femur. That this passage is not always easily accomplished can be readily understood; usually some difficulties are met with in executing the reduction; the narrowed capsule must be widened according to the diameter of the femur head.

If we open a joint we can not tell from the appearance of the narrowed part of the capsule whether a reposition by mere maneuvers would be impossible. Sherman[1] in his paper. however, avails himself of this kind of argument and in discussing his 28 cases comes to the conclusion that among 28 impossibilities there was only one possibility for getting a real reposition by the bloodless method. Of course, no one is able to prove such a statement. not even Sherman himself.

The same objection to the bloodless method was made in Europe at the time the first communications about it were brought forth. All these voices were silenced after it was proved that the impossibilities were lost sight of in the overwhelming number of possibilities. When Sherman's paper was discussed at the meeting of the American Orthopedic Association, Atlantic City, June. 1904, as far as I remember Sherman's standpoint was not supported in the general sense. An eminent guest of the association, Professor Hoffa of Berlin, who. like Lorenz, performed several hundreds of open and bloodless operations and who is a pronounced partisan of the open method, did not consent to Sherman's accounts, and preferred not to answer when Sherman asked him whether he really believed the possibility of driving the camel (the head of the femur) through the needle's eye (the narrowed part of the capsule). Each surgeon who has performed a bloodless reposition may answer this question for himself.

The possibility of the immediate success of the operation. which means the fact of the introduction of the head into the socket is the same. whatever method may be resorted to; but for the criticism of a method not only the immediate success of the anatomic result but also the permanency and the quality of the functional result comes into consideration and it must be emphasized that anatomic and functional results do not always correspond.

My connection with Prof. A. Lorenz in Vienna enabled me to form an opinion regarding the results of the two routine treatments, as in 1897, when I began to work with Lorenz, the open operation was still very often practiced by him in older cases, whereas, on the other hand, all those patients who have been operated on by Lorenz by the open operation previous to that time used to come regularly either for after-treatment or for an examination.

I was able to trace more than 200 cases of open operations in their results for a long time—some for several years. This gave me the opportunity to compare their results by interposition with the results obtained by the bloodless method.

The exact requirements of a perfect anatomic result are not always obtainable by performing the open operation. There are many cases in which the head does not stand centrally opposite the V-shaped cartilage, a sort of new socket being devolved above or in the back of this place. The functional result, however, is not altered by this fact, provided that it finds a stable position in its new place.

A much more important point is whether or not an ankylosis or restriction of motion in the joint operated on follows. Very often the success of the nicest anatomic reposition is annihilated or at least greatly interfered with by the presence of a total or partial ankylosis. This always threatens to develop when the children operated on are over 4 years of age. A sure exclusion of this disagreeable accident can never be warranted, however, not even in cases in which the children are operated on at a very tender age, say 2 or 3 years old, although the chance for a prospective ankylosis is greatly diminished.

Patients who suffer from a single dislocation only in cases of ankylosis may sometimes obtain, but not always, a half way good functional result so far as walking is concerned. Only after a long and tedious after-treatment of massage and gymnastics is it possible to teach them how to execute the motions of the thigh. In these favorable cases, too. a constant care and supervision and a continued after-treatment for years is necessary in order to overcome the tendency of contracture, which, if overlooked, flexes and adducts the thigh. thus causing in neglected cases formidable secondary shortenings.

For children operated on on both sides, the establishment of an ankylosis always proved disastrous. I know of 6 or 7 cases among the 240 open operations of Lorenz in which neither mobilizations under anesthesia nor secondary surgical interferences like resection of the head, nor gymnastic and passive motions, even when continued for years, were able to give any relief. Such patients are by far worse off with their double ankylosis after the operation than before, although the x-ray picture in some of the cases belonging to this group showed perfect anatomic replacement on both sides.

I wish to state these facts before going into a detailed discussion of the *advisability* of both methods. I think they explain clearly why the two orthopedic surgeons, Hoffa and Lorenz, who have the greatest experience with the various open operations, are righteously prepossessed in favor of the bloodless method.

The main objections which are made to the bloodless method by the partisans of the open operation are principally the impossibility of reducing the dislocated hip in all cases by bloodless manipulations; the dangers involved, such as hematomas, fracture of the bones, injuries of the capsule and of the nerves; the poor results as shown by statistics.

The first point, the frequently quoted impossibility of obtaining a reduction by the bloodless method, has been discussed enough and needs no further explanation. Sherman, in his paper, constructs on this infinitesimally small chance of not being able to accomplish a reposition within the proper age limits, a peremptory postulation to treat all cases by the open operation, without making an effort to reduce the dislocation by maneuvers, saying: " . . . if we are to save these cases, irreducible by manipulations, from the risks of forcible manipulation, we must save all, for no one can tell *a priori* which case is to prove reducible and which is not; and that will mean that all congenitally dislocated hips shall be reduced by arthrotomy."

The so-called dangers of the bloodless method, which have been discussed so often in various places, collapse if the operator, and this especially holds good for the unskilled operator, keeps himself within the age limits. All accidents, such as fractures and so on, are due to the fact that the operator either tries to increase the age limits or that he resorts to too much force without the exact knowledge of how much the tissues are able to stand. Both mistakes were made and are made frequently by the unskilled operator; if an accident then happens, of course "the method is responsible for the mischief done."

Lorenz himself made the same mistakes in the beginning and in this sense he reports them in his book. Similar cases are always reported if a method is comparatively new and its indications still unsettled.

Fractures of the bone and ruptures of the capsule can be promptly excluded by care or by resorting to a kind of preparatory treatment consisting in tenotomies and extension if greater difficulties should be foreseen.

The same is not true of the subcutaneous lacerations of some muscles (like the adductors) and the extravasate which is observed in many cases. No complication, however, ever results from their presence. No one should believe that accidental lacerations are absolutely excluded by using the open method. Sherman's case, in which the perineum was torn, is a classical example of this. Everyone knows that the resistance of the shortened muscles of the hip joint must be overcome by traction alone in performing the open operation. Therefore, it can be safely said that paralysis is more apt to happen in the course of an open operation than after a bloodless operation. This especially holds good for the paralyses of the sciatic and principally of the peroneal nerves. Sherman also reports a case of paralysis among his twenty-eight cases.

As the peroneus nerve is fixed where it enters the capsule of the peroneal muscles, it is easily understood that the fibers have to be stretched to overcome the shortening caused by the dislocation. As the knee joint is held rectangularly after the bloodless operation, the strain on the peroneal fibers is relieved, whereas the straightened knee joint held in a straight position by the cast after the execution of the open operation does not afford any relief. In consideration of this fact, which can be proved by experience, one of the strongest claims of the open operation falls to the ground. Another kind of paralysis which sometimes develops after the bloodless reposition does not deserve any consideration at all; it is the so-called paralysis of the quadriceps; this disappears spontaneously within two or three months, not leaving the slightest sign of its presence.

It must not be forgotten that there are dangers which are connected with every open operation and which neither the best technic nor the most skillful operator can exclude with absolute certainty.

Sherman asks why the orthopedic surgeon should be afraid to open the hip joint. I think it is safe to say that not one of them is "afraid" to open it, but that a good many of them decline righteously the responsibility of representing this procedure "as absolutely harmless" so far as the life of the little patient is concerned. It is a matter of fact that every operator who resorted to the open operation on a large scale had deaths among his cases, although the percentage may be small, perhaps 2 or even 1 per cent. This should make it apparent that among 28 cases no death must necessarily occur.

If, however, such an accident happens and sepsis claims a victim, then we can not compare such a death with an exitus after an appendectomy or laparotomy.

We never performed nor ever will perform any operation for a dislocation of the hip joint under a coercion similar to that which lets the surgeon choose between death and the operation, because all orthopedic operations have only a conditional indication.

One of the main questions of the parents is, and always will be, whether there is positively no danger connected with any of the proposed operations. With regard to the open operation, I leave the answer to the honesty of the surgeon whom it may concern; with regard to the bloodless operation, however, an affirmative answer to this question can be given quite frankly.

At all events, no death which should occur after an open operation performed for reduction of a congenitally dislocated hip joint can be excused, for nowadays the bloodless method has been developed and such accidents are excluded.

A total failure meets the recommendation of the open method if statistics of the bloodless method are referred to. Sherman, however, in quoting statistics comes to the opposite result; fortunately, however, he quotes two sets of statistics, which can not be considered as giving valid figures.

The first is the statistic of Wolff, a fanatic believer in the Lorenz method who died in 1900. He began experimenting with this method in 1896. No one can expect that his first cases could show the best figures possible. Nevertheless, his statistics in question showed 25 per cent. of anatomic cures. Since then the method has been developed to a much higher degree of efficiency, so that Wolff's statistics can not be quoted seriously to-day.

The other statistics quoted by Sherman are Ridlon's,[4] which, although published in 1904, are not at all fitted to prove anything. The many objections which can be made to his statistics I[5] described in a previous paper. I do not wish to fall back on them in this place, but wish only to mention that Ridlon's statistics deal mostly with cases operated on by Lorenz during his visit in this country, and showed about 10 per cent. anatomic results. The fact that many of these cases were unsuitable for the operation because of the advanced age or because they had been operated on before, or that other cases such as the suprapubic positions (anterior transpositions, Ridlon's) did not get the right kind of after-treatment (depression of the head) has been alluded to in the beginning of this paper.

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[4] Ridlon: The Journal A. M. A., April 16 and 23, 1904.

[5] Mueller: The Lorenz Operation as Seen in the American Statistics. Ill. State Med. Jour. October, 1904.

Fortunately there are other reliable statistics[3] existing, among which I wish to point to those published quite recently and quoted by me in my above mentioned paper, as well as at the Atlantic City meeting of the American Orthopedic Society, 1904.

These statistics are compiled by E. Mueller, Stuttgart; Joachimsthal, Berlin, and Drehmann, Breslau, and were published in 1903. The numbers of the anatomic results are 28 among 40, 17 among 23, 43 among 56, respectively.

Altogether, they show more than two-thirds of anatomic cures. From this it is to be seen that Lorenz is very conservative in pronouncing a possibility of 50 per cent. anatomic cures. Seventy-five per cent. would not be too much, and, with some improvements of the method, a still greater percentage might be obtainable.

Another statistic recently published by Braun[6] shows 57 ideal anatomic results among 117 joints; excellent functional cures were obtained in 72 of these 117 cases.

We must not lay too great a stress on the anatomic results alone, however. We have also to consider the remaining 33 or 25 per cent. of cases which do not give a central reposition, but only a subspinal position (anterior superior redislocation). In these cases we always find such a great improvement that—suitable after-treatment provided—the overwhelming majority give such excellent functional results that they can truly be called a cure. The fact that no subspinal position is ever combined with partial ankylosis or stiffness of the hip should be highly appreciated.

This fact renders the second-class result after the bloodless reposition by far superior to the second-class result of the open operation, where we obtain ankylosis; as far as the functional result alone is concerned, the subspinal position exceeds even many so-called first-class results of the open operation. Therefore, Lorenz, who had his experience with the postoperative ankyloses after the open operation, knew why he called the subspinal positions "good" results, and every orthopedic surgeon who has had the misfortune to get a double ankylosis after an open operation, thus crippling the patient more than before, must agree with him.

We have all been taught that the first principle of medicine should be: *Primum non nocere*.

If we keep this in mind and if we are desirous to avoid even a mere chance of offending against it, we can have no doubt which method, whether the open or the bloodless, will be the method of the future days.

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[6] Braun: Zur unblutigen Therapie der Luxatio coxae congenita. Langenbeck's Arch., 1904, vol. lxxiv, No. 3.

A Bandage for Varicose Veins.—A zinc-glue bandage may be made of gelatin, glycerin, zinc oxid and water, heated in a water-bath and applied to the bare skin with a painter's brush. Then a gauze or cheese-cloth bandage is applied, very evenly and not too tight. This is painted with a zinc-glue, and a new bandage applied outside it. Such a bandage may be worn from five to eight weeks without change. Dr. H. Keogh states, in the *Northwestern Lancet*, that dozens of his patients who have been almost in despair at the annoyance of their varicose legs, have been made comfortable by this bandage.

INTESTINAL PERISTALSIS.

ACTION OF DIFFERENT AGENTS ON IT.

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AND
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The recent method of Professor Magnus[1] of Heidelberg in the study by registration of the intestinal movements has simplified the investigation of the action of agents on the intestine. Magnus names two kinds of periodic movements of the intestine: 1, the pendulum movements, which follow each other rapidly in a contraction and relaxation of the intestine; and, 2, a tonus variation, much slower, but making periodic changes in the intestine. Drs. Kubliabko[2] and Alexandrowitsch, using the method of Magnus, have published a preliminary note on the action of several agents on the movements of the intestine.

Our experiments were made by taking a piece of the small intestine, about 10 centimeters in length, of a rabbit or cat. This was placed vertically in a glass containing 225 c.c. of the modified Ringer solution as advised by Magnus. One end of the intestine was fastened by a hook to an L-shaped glass tube and the other by a thread to Porter's heart lever, slightly weighted. The intestine was wholly immersed in the solution through which oxygen was constantly streaming. The temperature of the Ringer solution was about 37 C. The heart lever registered the contraction of the longitudinal muscles of the intestine on the smoked drum.

Before adding the agent to be experimented with to the Ringer solution several contractions were recorded before the substance was dropped into the solution containing the intestine. The changes then induced in the intestinal contractions indicated the action of the agent on the longitudinal muscles. The number of experiments was 115.

ADRENALIN.

Ott[3] was the first (1897) to call attention to the fact that adrenal extract caused a relaxation of the intestinal wall. This was afterward confirmed by Boruttau (1899), Langley (1901) and subsequently by Pal (1901) and Kubliabko (1904). In these experiments we used the adrenalin of Parke, Davis & Co.

As is well known, adrenalin excites the smooth circular muscles of the arterioles to contract, but in the intestine it causes the longitudinal muscles to relax and to stop the pendular movement.

It seems to exert its action on the unstriped muscular fiber. Langley has shown that the effect of adrenalin on unstriped muscle was the same as exciting the sympathetic nerve supplying that particular tissue. Elliot[4] has shown that, after section of the nerves going to the plain muscle of the dilator pupillæ and after their degeneration for three days or ten months, the plain muscle will respond to adrenalin with greater rapidity and longer persistence than does the iris, whose nervous relations are intact. Hence the conclusion that adrenalin acts on the muscular fiber of the intestine. When the intestine was painted with a 2½ per cent. solution of cocain, or treated with small doses of nicotin, pilocarpin, muscarin, eserin, apocodeia, morphin, digitalin, curare, albumose, chloral and veratria, still adrenalin exerted its peculiar action, arresting the pendulum movement and producing a relaxation of the longitudinal muscles of the intestine. One drop of adrenalin solution was sufficient.

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[1] Pflüger's Archiv, 1904.

[2] Zentralblatt für Physiologie, 1904, July.

[3] The Peristaltic Action of the Intestine, Medical Bulletin, 1897.

[4] Proceedings of Physiological Society, Jour. of Physiology, 1904.

SPLEEN.

Ott[5] first noticed that a filtered watery infusion of the spleen when injected into the circulation increased the peristaltic movement both in frequency and force. In this method of study a similar effect was observed.

PANCREAS.

One drop of filtered infusion of the pancreas in the cat was seen to relax the muscle and to slow the movements of the intestine. At the same time the force of the contraction was increased.

OTHER ANIMAL EXTRACTS.

Experiments were made with the ovary, testes, parotid and mammary gland, pituitary, thyroid, brain and spinal cord, but they had no marked effect on intestinal peristalsis. The thymus occasionally seemed to increase the force of the contraction.

SODIUM CITRATE AND CALCIUM CHLORID.

John Bruce MacCallum[6] has shown that sodium citrate, as well as other saline purgatives, act when injected subcutaneously by increasing peristalsis and by augmenting the secretion of fluid in the intestine. He has also shown that injection of calcium chlorid entirely inhibited the action of the saline, especially that of sodium citrate. We have made observations on the effect of sodium citrate (¼ grain), which increases the force of the peristaltic contractions; when calcium chlorid (1 grain) was added the muscle relaxed and the contractions became weaker, slower and irregular.

MacCallum thinks purgatives act by the removal of calcium ions from the tissue, and the subsequent addition of calcium restores the tissue to a normal condition. Loeb has shown that the salts which produce rhythmic contraction of the involuntary muscle are those which are liable to decrease the concentration of the free calcium ions. Hence calcium is indicated in persistent diarrhea of nervous and hysterical cases.

OTHER DRUGS.

Atropin.—In small doses (1-100 grain) in the cat it relaxed the tonus and increased the force of the contractions.

Nicotin.—In the rabbit in small doses (1/100 grain) it caused a sudden tetanic contraction of the intestine, followed by a slow relaxation. In cats it caused at once a great decrease in the tonus and then a stronger and slower contraction.

Eserin.—In the rabbit eserin (1-60 grain) produces a rapid tetanic contraction of the muscle, followed by alternate falls and rises of tonus, with smaller and slower contractions.

Muscarin.—In the rabbit muscarin (1-60 grain) produced a sudden contraction of the intestine, followed by a gradual relaxation.

Pilocarpin—In the cat small doses (1/60 grain) caused the most prolonged tetanic contraction of the muscle, with occasional relaxation of the tetanic state, followed by a slower and stronger contraction.

Strychnia.—In small doses strychnia (1/50 grain) increased the height of the contractions.

Curare.—Curare in small doses reduced the force of the intestinal contractions.

Apocodeia.—In small doses (1-100 grain) it increases the force of the contractions and makes them slower.

Morphin.—In the cat in small doses it increases the tonus and the force of the contractions, but slows them. Here morphia has a different action than in man.

Digitalin.—In doses of 1-80 grain it increased the tonus and made the contractions considerably greater.

Chloral.—Chloral in small doses reduces the force and frequency of the contraction.

Veratria.—Veratria in small doses reduces the force and frequency of the contractions.

ORGANIC BODIES.

Bile.—One drop of fresh bile caused the contraction of the muscle to become stronger.

Albumoses (free from peptones).—The albumose was furnished some years ago by Professor Chittenden of Yale. It was prepared from egg albumin. When a small dose (1-10 grain) was used it increased the tonus and the force of the intestinal contraction and made them more regular.

Peptones (free from albumoses).—*Ampho-peptone*, prepared from egg albumin by Professor Chittenden, was also used. It increased the force and frequency of the intestinal contractions.

Leucin (Merck).—It increased the force and frequency of the intestinal contractions.

Tyrosin (Merck).—It increased the force of the intestinal movements.

It is evident that the products of proteid digestion are active stimulants of peristalsis. A good digestion predisposes to a regularity of evacuation of the bowels.

These facts explain the habitual constipation of dyspeptics.

ANTAGONISM OF DRUGS ON INTESTINAL PERISTALSIS.

With the idea of obtaining a closer insight into the action of drugs on the intestines, several experiments were made to determine if one drug prevented the action of another previously given.

Small doses of the drugs were applied to the intestine in solution. The table gives the results:

AFTER COCAIN.

(Two and one-half per cent. solution painted on the intestine.)
No action by nicotin, pilocarpin, muscarin.
There is an action by eserin, atropin, morphia, digitalin.

AFTER ATROPIN.

No action by nicotin (in rabbit; acts in cat), pilocarpin, muscarin.
There is an action by eserin, morphin, digitalin.

AFTER ADRENALIN.

No action by nicotin.
There is an action by pilocarpin and muscarin.

AFTER MORPHIN.

There is an action by atropin and nicotin.

AFTER DIGITALIN.

There is an action by nicotin, atropin.

AFTER ESERIN.

There is an action by atropin.

AFTER CURARE.

There is an action by nicotin.

ADRENALIN.

Acts after cocain, nicotin, pilocarpin, muscarin, eserin, apocodeia, morphin, digitalin, albumose, curare, chloral, veratria.

As nicotin is known to act on the terminals of the preganglionic fiber, it is evident that it probably acts in a like manner on the intestine. Eserin antagonizes atropin, and atropin acts after eserin. As *atropin* acts on the post-ganglionic fibers of the vagus, it is probable that it also acts on the post-ganglionic fibers in the intestine. Eserin also in all probability acts on the

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5. Medical Bulletin, 1897.
6. University of California Publications, vol. 1, 1904.

post-ganglionic fibers. These facts do not preclude an additional action on the intestinal muscle in larger doses of these drugs. Magnus has shown that Auerbach's plexus is important to the rhythmic activity of the circular muscles. The removal of Meissner's plexus permits the circular muscles to continue their rhythmic contractions. The longitudinal muscles which have Auerbach's plexus in connection with them continue their automatic movements. Hence the conclusion follows that the automatic movements of the intestinal musculature are not myogenic, but dependent on Auerbach's plexus. Magnus has also shown that not only is the plexus of Auerbach a source of automatic movement, but that it in a large part governs the rhythm, and that the refractory period in the intestine is due to the presence of the nerve centers.

Bayliss and Starling have stated that painting a 2.5 per cent. solution of cocain on the intestine paralyzes the local nervous system. They have shown that in fact Auerbach's plexus is a local nervous system with two reflexes, inhibition and augmentation, and one function, the propulsion of food. Now, after the use of cocain it was noted that nicotin, pilocarpin and muscarin did not act. We have stated the point of action by nicotin. As to pilocarpin and muscarin, they act in the heart on the inhibitory ganglia. After cocain they do not act. As cocain paralyzes the nervous apparatus, it is highly probable that they act normally on the plexus of Auerbach.

After the intestine is painted with cocain then eserin, atropin and morphia still act, and as the nervous system of the intestine is paralyzed it is inferred that these agents act on the motor nerve terminals. For it is known that one of them at least, atropin, paralyzes the post-ganglionic fibers of the vagus. As to digitalin, it acts on the muscle of the intestine, as it exerts its activity after the previous use of cocain.

During the action of adrenalin, nicotin does not act, although pilocarpin and muscarin do. It is probable that nicotin has not enough stimulant action to overcome the muscle relaxation caused by adrenalin.

THE ESSENTIALS OF TREATMENT OF ACUTE INFLAMMATION OF THE MIDDLE EAR.*

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I am not unmindful of the diversity of opinion among otologists as to the essentials of treatment of an acute inflammation of the middle ear; and in giving my personal opinions, based on considerable observation and experience, it is possible that I shall advocate some measures which may seem somewhat radical and not thoroughly approved by some of you. It is gratifying to know, however, that the trend of medical teaching to-day is in favor of more radicalism in the treatment of acute middle-ear inflammations and that the so-called conservative treatment, in the management of these cases, is considered by most progressive otologists as carrying with it a decided element of danger.

Most authors divide acute inflammation of the middle ear into two forms, the catarrhal and the purulent. Clinically, the two forms should be considered as different stages of the same disease, the difference in the character of the inflammatory process depending on the presence and activity of the infection and the resisting power of the tissues, features that are always factors in the production and the limitation of an inflammation of the middle ear. When an acute inflammation of the middle ear does not end in suppuration it is either because the micro-organisms necessary for suppuration are not present or because the resisting power of the tissues renders them ineffective.

Bacteriologic investigations have shown that various micro-organisms can produce similar pathologic effects on the middle ear, but as a rule the milder forms of middle ear inflammation are produced by the pneumococcus or the staphylococcus, and the severer forms by the streptococcus (Nadoleczny). The fact that the milder forms of middle ear inflammation often run into the severer forms makes it difficult if not impossible in many cases to distinguish the two forms of inflammation described by most authors. Neither subjectively nor objectively will the symptoms in a large percentage of cases give evidence of the character of the infection at work, for in some individuals the pain will be very severe and the congestion of the membrana tympani pronounced in a comparatively mild inflammation, while in others the pain will be slight and the external evidences of congestion not marked in a very severe inflammation.

In probably 99 per cent. of all cases the infection reaches the middle ear through the Eustachian tube. Even in healthy individuals the bacteriologic examination of the secretion from the nasopharynx almost always shows the presence of a certain number of pathogenic bacteria, and in the presence of diseased conditions of the nasopharynx, as in the case of hypertrophied and degenerated conditions of the lymphoid pharyngeal structures, or inflammation of the nasal and pharyngeal mucous membrane accompanying many of the infectious and contagious diseases, the number of pathogenic bacteria is greatly increased.

The extension of bacteria to the middle ear by means of the eustachian tube is accomplished by mechanical means, as from pressure while blowing the nose and while swallowing, or by extension of the inflammation through continuity of tissue. Predisposition, as well as activity of the infection, will in a large measure determine the extent and the severity of the inflammation. If the infection is mild the inflammation may not result in suppuration but may continue to the end devoid of severe symptoms or manifestations, and as such it may be classed with the catarrhal inflammations in which the exudation is sero-mucous in character and the bacteria few in number and of low vitality. It should be remembered, however, that such an inflammation may be transformed into the suppurative type through introduction of more active infection through the Eustachian tube or, in case of perforation of the drum membrane, through the external auditory canal. What, therefore, begins as a comparatively mild inflammation may very quickly pass into a severe inflammation with all the attending danger of complications and perhaps loss of life. This transition of one type to the other may be so rapid as to escape early recognition unless the otologist is in a position to watch the progress of the inflammation much more closely than is generally the case, and as a result proper treatment may be adopted too late to limit ravages of the disease which might have been limited or prevented by earlier attention.

The possibilities of an earache, and a moderately congested ear-drum in whole or part, are not limited erin tampons applied directly against the drum membrane.

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*Read before the American Otological Society at Toledo, Ohio.

4. Cleanse the nasal and pharyngeal mucous membrane with a saline antiseptic spray or douche. Remove any existing hypertrophied lymphoid tissue.

5. Advise cautious blowing of the nose to limit introduction of infection to the tympanic cavity.

6. Apply dry heat to aid in control of pain.

7. Incision of the drum membrane under strict aseptic precautions on the appearance of pronounced redness of any portion of that organ when accompanied by pain, impairment of hearing and other evidences of acute inflammation.

8. Following perforation of the drum membrane the use of aseptic dry gauze packing for the purpose of excluding infection from without and also to withdraw the discharge from the tympanic cavity by capillary attraction.

9. Syringing, under aseptic precautions, only when the discharge is purulent and profuse, to be followed by as thorough drying as possible with sterile absorbent cotton.

10. Judicious inflation by Politzer's method only after the acute symptoms have subsided or after the drum membrane has been opened, to facilitate removal of discharge from the tympanic cavity and to prevent adhesive changes in the sound conducting apparatus.

11. Appropriate treatment of any associated systemic disease.

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TURNING IN ORGANIC HEMIPLEGIA.

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Dr. Leonard J. Kidd recently discussed the mode of turning in walking of organic hemiplegics and spastic paraplegics and referred to a paper by von Schüller in which the latter says that an organic hemiplegic cannot walk toward the sound side, as he must drag the paralyzed leg after him. It is also pointed out that the functional hemiplegic does not walk toward the palsied side but only toward the sound side, and Kidd concludes that the direction in which the hemiplegic turns is of equal diagnostic value, and that this test causes less inconvenience to the patient. To prove the correctness of this opinion, he examined hemiplegias and spastic paraplegics who were more spastic on one side or the other, and found that fully 99 per cent. spontaneously turned to the spastic or more spastic side. From this he draws the following conclusions:

1. If such a patient in walking turns round to the affected side or more affected side, an organic lesion is present.

2. If he turns to the sound or less affected side the case may be one of either functional or organic affection; a cursory examination will determine which.

As he urges clinicians to observe the direction in which a patient turns who is weak or spastic on one side, and as no one else has attempted to confirm his conclusions, I examined 36 cases of organic hemiplegia in order to determine the value of his observations. The patients were made to walk in some open place, to turn round of their own accord and to come back to the starting point. This was repeated and when the strength and facility of walking permitted, 10 turns were made.

In some cases, the mentality was such that the patients could not be made to walk away and to return merely on being told to do so, and it was necessary in these cases to call to them to come back.

It was found that the direction from which came the sound of the voice, and the presence of persons or objects, were sufficient to determine the turning in some particular way. As far as possible, crutches, canes and all outside influences were removed. It was found that only 67 per cent. of the whole number turned to the affected side, 16 per cent. turned to the sound side, and 16 per cent. turned indifferently to either side; a difference of over 30 per cent. from Kidd's figures.

While most hemiplegics seem to turn by preference to the more affected side, they do so in such numbers as hardly to make it a rule. Moreover the less the paresis and the greater the difficulty of determining between organic and functional complaint, the more indifferently the patient turns to either side, as shown by the fact that half of those examined who turned to either side walked excellently. The factors which determine the direction in which a hemiplegic patient turns seem to be many, but it may be said that when the paralyzed limb has marked foot-drop and contracture in that position, it becomes necessary to sweep the foot around in a large circle to bring it forward, and the turning is done on the other foot as a pivot. If the palsied leg be not so deformed, and it is not necessary or perhaps is difficult to swing the leg around, the turning is done on the affected leg as a pivot. If this is so, it is plain that there may be intermediate positions of deformity in which the patient turns to either side. One patient examined said that he turned according to which foot was foremost at the time, his position determining the direction, but most of those who were asked after being examined did not confess to its being any easier to turn one way than the other. Several hemiplegics moreover who turned consistently to one side were examined and told to turn in walking at such times as one or the other foot was advanced, but they nevertheless turned toward the same side as formerly, so that at most the patient's position explains but a part of the phenomenon.

If it can be shown that a functional hemiplegic ever turns to the affected side, and observations are perhaps needed to that end, the value of Kidd's deductions is much lessened. While the above findings do not disprove his conclusions, that a man who turns to the affected side is organically diseased, they make that fact applicable as a test to fewer cases, and consequently leave a larger proportion open to other means of diagnosis.

I am indebted to Dr. William G. Spiller for the use of his wards at the Philadelphia General Hospital, where about half of the cases examined were obtained, and also for his corroboration of part of the work done.

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1. Kidd: Review of Neurology and Psychiatry, November, 1904.

Management of Labor.—1. Absolute asepsis as regards the puerperal woman, lying-in room, and the person of the accoucheur. 2. A careful diagnosis of the position of the child should be made before the completion of the first stage of labor. 3. Watch expectantly the progress of the labor. 4. Non-interference during the labor except for cause. 5. A clean delivery of the placenta. 6. Be assured that there is a good contraction of the uterus before leaving the patient. 7. After the delivery, examine carefully by ocular inspection, and see if there is any laceration of the perineum. 8. If a laceration be discovered, repair at once.—*Medical Visitor.*

THE PREVENTION OF SHOCK AND HEMORRHAGE IN SURGICAL PRACTICE.*

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INTRODUCTORY.

During the past eleven years I have conducted an experimental laboratory, in which some of the problems suggested in surgical practice have been investigated. On some we failed to throw any light; in some our results were inconclusive; and in others their solution seemed to have been found, or at least useful data obtained. These were published in four monographs, to wit: *"Surgical Shock,"* 1897; *"Research into the Surgery of the Respiratory System,"* 1899; *"Problems Relating to Surgical Operations,"* 1901; *"Blood Pressure in Surgery,"* 1903.

On the clinical side during a corresponding period, we accumulated notes on 5,800 major operations in general surgical service, including every variety excepting certain operations on the eye and ear.

The discussion of the various operations is only from the restricted viewpoint of the title of this paper. In the experimental as well as the clinical work my associate, Dr. W. E. Lower, was actively engaged during this time and shares fully with me the responsibility for the results.

In this paper we shall assume that pure surgical shock is mainly due to the effect on the vasomotor centers of the afferent impulses set up by trauma, exposure, etc.; that each such impulse modifies these centers; that a sufficient number of such impulses with sufficient intensity over a given period of time causes the vasomotor centers to lose their excitability; that during the production of this functional impairment and final breakdown the blood pressure becomes irregular, becoming proportionately lower, and when the final stage of complete loss of excitability of the vasomotor center has been reached the pulse in the peripheral arteries can not be palpated and the carotid pressure would probably register not more than 20 mm. mercury. This would represent a picture of complete shock, presenting a very unfavorable prognosis. The symptoms are a close counterfeit of those of hemorrhage, indeed, the state of the circulation is that of a transference of the blood to the venous side of the circulation; that is, it is an intravascular hemorrhage, but because the hemorrhage is intravascular the symptoms should not be unlike those of an extravascular hemorrhage. The afferent impulses may either be of such intensity or of such great numbers, or more usually both, as to cause this functional dissolution.

Among the accessory causes, aside from the afferent impulses mentioned, there may be mentioned certain factors that lower the physiologic resistance, viz.:

(*a*) Psychical excitation, such as fear, foreboding, etc. This needs only to be mentioned to be admitted, and it has seemed to me to be a more powerful factor than is usually considered.

(*b*) Hemorrhage. This also is a self-evident factor, and often very difficult to estimate closely.

(*c*) Cold. The depressing effect of the lowering of the body heat, as noted in exposure to cold on battlefields, in undue exposure in the operating room, and in many physiologic experiments, is well established. In practice I place the patient on a hot-water bed adapted to the operating table.

(*d*) Acute and chronic infections. In these infections there is a marked physiologic disturbance of many parts of the body, and certainly not the least is the circulatory mechanism.

(*e*) Anemia, cachexia, collateral diseases, etc.

(*f*) Age and sex.

Of all these accessory causes of shock we may for our present purpose reduce them to a physiologic basis as follows: The vasomotor centers have a normal definite range of functional capacity. When one or more of these accessory factors enter, this range of definite functional capacity is by so much definitely reduced. This is a plain physiologic law.

In practice one finds one or more of these factors in the vast majority of his patients. That is to say, most of our patients are handicapped in various degrees, from the slight to the grave, even fatal. These handicaps should be our special consideration, and our ability to correctly estimate them on the one hand, and to correctly estimate the vital cost to execute a given technic on the other, constitutes in my opinion the most difficult problem presented to our surgical judgment for decision.

OPERATIONS ON THE HEAD.

Horsley and Spencer long ago demonstrated the dangers of increased intracranial pressure, and Cushing has offered an explanation of the physiologic necessity for the increased general blood pressure under this condition.

In tumors, abscesses and hemorrhages, causing an increased intracranial pressure, the blood supply of the extracranial portion is increased. This was more especially noted in the veins. The blood pressure of the brain under these circumstances is at an irreducible minimum. Therefore, until decompression of the brain has been effected, it would be unsafe to materially lower it either by hemorrhage or anesthesia. After having lost one case of extensive, acute hemorrhage during the second stage of anesthesia, I have in severe cases opened the skull under local anesthesia.

In other instances I have, when necessary, detailed an assistant to give artificial respiration while the bone was rapidly cut away. Alternating heat and cold are perhaps the most powerful respiratory excitants. In two instances respiratory arrest was successfully combated on these lines.

The most severe cases were those of traumatic origin in which opportunity for physiologic compensation was greater. Marked assistance in control of the troublesome venous hemorrhage was obtained by applying the pneumatic rubber suit and placing the patient in the 45-degree upright posture, thereby gaining the advantage of gravity in decreasing the venous pressure in the vessels of the head and maintaining or even increasing the arterial pressure in the same territory. In opening the skull, if by mallet and chisel, it is very important to use the greatest gentleness, as both the clinical and experimental evidence show that the medulla is seriously disturbed by the repeated percussions of the mallet. In opening the skull, in my earlier cases, I am sure that the mallet and chisel provoked some serious circulatory disturbances. Since using only well-beveled, sharp chisels more precisely and a light mallet more gently, I have not detected any circulatory changes.

The supreme importance of reducing to a minimum the exposure and manipulation of the meninges and the brain can only be fully appreciated after noting the circulatory changes and the loss of cortical excitability in laboratory experiments. Unless precise arrest of the hemorrhage is made as the operation progresses the operator is quite likely to do unintended damage in sponging.

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* Read before the Pittsburg Academy of Medicine, 1905.

Since in intracranial operations sudden circulatory disturbances are always imminent, the blood pressure is in all cases continuously noted by a special assistant for that purpose. The patient is inclosed in the pneumatic suit during the early stages of anesthesia, and saline solution and adrenalin are at hand. That is to say, as complete preparation as possible for the control of the blood pressure is made.

CLAMPING THE CAROTIDS.

Since the first case, which was in 1897, I have closed the common or the external carotid artery 51 times with no unfavorable results. The effect on hemorrhage is found to vary greatly. In some the arterial hemorrhage is completely controlled; in others, owing to the greater collateral circulation, but particularly owing to the freer anastomosis, especially through the circle of Willis, a distinct peripheral pulse was noted. That is to say, the blood continued in a pulsating circulation from the opposite unclamped artery through the circle of Willis, causing a reverse current through the peripheral cerebral vessels of the clamped side, re-establishing the circulation through all the branches supposed to be closed off. This reverse circulation in several instances was sufficient to produce a pulsating hemorrhage in the severed terminal arterial branches of the external carotid.

In such cases closure of the external carotid would be more effectual, and in operations in which the factor of hemorrhage is of great moment, as in cases in which the tumor is supplied from both sides, both external carotids have been closed.

The venous hemorrhage, as we have said, is but slightly modified by closure of the carotids. At present the most effective means of lessening the venous hemorrhage is by posture—the head-up posture. In the past this has been the method of choice in all cases in which the danger of cerebral anemia was not present. The pneumatic rubber suit enables us to make free use of this position, as by means of it the blood is not permitted to accumulate in the veins of the body below the diaphragm.

So far as we now know the most favorable condition for controlling the hemorrhage in certain major hem-
rrhage risks is by closure of one or both common or
xternal carotids according to the location, and the
ead-up posture with the patient inclosed in a pneu-
natic rubber suit.

LARYNGEAL AREA.

In such operations as intubations, laryngotomies,
2ngectomies, intralaryngeal operations of all sorts,
ase ıtors have reported instances of sudden collapse or
ion;
As his now well understood to be due to reflex in-
ıich a ıf the heart and of the respiration from me-
ce, and ımulation of the superior laryngeal nerve.
stclusionsiac collapse may be wholly obviated by pre-
rdarder to inistering a physiologic dose of atropin, or
lmients were ocain on the nerve ending in the laryn-
g ad of their by injecting its trunk with cocain.
a, ding point. claims a more definite law or a more
rcelygth and facıon.
made. ıl laryngectomies for carcinoma, in
omen the definite cause and prevention
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had been worked out in the laboratory, dangerous collapse occurred; in the remaining nine not even a change in respiration or in the heart rate was noted. Because of this dangerous reflex area in the larynx, tracheotomy, not laryngotomy, should be the operation of choice.

THORAX.

In intrathoracic infections with a seriously hampered respiration and a circulation dangerously impaired, one may often with greater safety do a morphin-cocain operation for a mere intercostal opening or resection of a rib, relieving the impending danger, and after the patient's forces are recruited, a more complete operation under surgical anesthesia may be made.

In intrathoracic procedures one must not lose sight of the supreme importance of the respiratory action on the circulation—constituting a great respiratory pump for the circulation, especially for the venous inflow. Even in the normal the circulation is most seriously hampered when both the pleural cavities are opened, thereby eliminating the suction power so necessary to fill the auricles.

In such cases, while by one of the various methods of positive ventilation of the lungs, as by the Fell-O'Dwyer apparatus, in pulmonary collapse oxygen may be freely supplied while the greater danger, that of circulatory collapse, is little if at all obviated. Extensive pressure on the other parts of the body is the most important in throwing back the blood into the thoracic circulation and permitting the heart to refill in the face of the loss of the respiratory pump.

In all intrathoracic procedures one must ever bear in mind the high importance of interfering with the great venous trunks, since their blood pressure is very low, they are surprisingly easily compressed. Such compression would have an immediate disturbing value to the heart's action, equal to a torrential hemorrhage.

ABDOMEN.

In abdominal operations the amount of shock depends in a direct ratio on the trauma and the exposure. This territory bears a rich supply of vasomotor nerves, and the effect of a given operation on the vasomotor center is the sum of the exposure and the intensity and the number of mechanical contacts with the delicately receptive nerves. It follows in practice as truly as in theory that a given operation in the hands of one operator may be manifold more shock-producing, than in the hands of another.

In extensive technical operations, such as the removal of tumors requiring resections of intestines. in certain cases of gastro-enterostomy with entero-enterostomy, in ureteral and in any other time-consuming, exacting technics when no special contraindication exists. morphin-ether anesthesia is used, ether during the abdominal incision, and the exploration and development of the operative field, and morphin alone with slight or no ether accessory during the technic proper, then ether again in closing the abdominal wound.

The region around the diaphragm and the large splanchnic trunks, as in operations for common duct gall stones, operations on the head of the pancreas, etc., is especially shock producing.

The expiratory moan in these upper abdominal operations near the diaphragm may deceive the anesthetizer and mislead him into giving excessive anesthesia. This is entirely analogous to the inspiratory moan while working on the sigmoid or rectum in pelvic operations, or divulsing the sphincter ani. Manipulation in the peritoneum other than the latter mentioned areas, especially if rough or extensive, may cause an expulsive action, a powerful action tending to force out the bowel by definite straining pheuomena. The greater the surgeon's efforts at returning the intestine the greater the mechanical stimulation, and so the greater the expulsive response, which in turn stimulates the operator to greater effort, completing a physiologic vicious circle, which, when once started, continues until either the reflex or the operator is overcome. In acute peritonitis this state is most likely to occur.

In anemias, cachexias and acute infections, a most careful physiologic invoice of the available vitality is made, and a procedure requiring an expenditure falling within such limit is chosen. In illustration, in cases of acute cholecystitis, in deep toxemia, in subjects varying from 36 to 96 years, by a cocain-morphin, or a cocain-morphin-gas anesthesia, a simple opening for drainage was made. After the acute stage had passed, in two cases, under gas or gas and ether, better drainage was provided and in one an impacted stone was removed. All recovered.

The same plan has been repeatedly employed in pelvic and appendiceal abscesses, and in one instance in an abscess in the lesser peritoneal cavity caused by a perforating duodenal ulcer simple drainage under cocain was made and later a radical operation was successfully done. Operative treatment by a process of physiologic progression is not infrequently demanded.

In operations on the pelvic organs we are impressed that this area is somewhat less shock producing than equally extensive dissections above the pelvis.

EXTREMITIES.

The prevention of shock in operations on the extremities has resolved itself into two or three simple propositions, the minimum loss of blood, the minimum manipulation and force, and the "blocking" of the nerve trunks by intraneural injections of cocain or eucain.

In considering the first proposition, surgeons will succeed by individual methods. I have within the past two years adopted the plan of direct dissection, using for the soft parts precisely the same instruments as for a breast amputation. The smaller vessels are secured in passing and a dry field is maintained. The large nerve trunks are exposed as early as possible and "blocked." The larger vessels are ligated and divided as they are reached. Great care is exercised in so dividing the tissue that any further revision is not required. The bone is divided by means of a Gigli saw, obviating the heavy manipulation of retraction of the entire stump when a plain saw is employed.

As an example, in intrascapulo-humeral amputations by first exposing the subclavian artery and vein and the brachial plexus through the same incision each trunk of the plexus is "blocked," the artery and vein are then secured and the skin incision of the part supplied by the cervical nerves is then made. The anesthetic may then be withdrawn, as the major field remaining has been anesthetized by the physiologic "blocking" of the brachial plexus—not only anesthetized but rendered shockless. As no impulses of any kind can pass either upward or downward, there is no more shock in dividing the tissues, even the nerve trunks thus "blocked," than in dividing the sleeve of the patient's coat.

Blood-pressure observations by means of a sphygmomanometer during such operations entirely substantiate this statement. After the effect of the "block" wears away, however, impulses pass up from the injured nerves just as after amputation by any other method, but the vasomotor centers have been protected against their greatest dangers and can better tide over the crisis.

Since my original publication of the peculiar property of cocain, whereby shock-producing impulses were "blocked" in the large nerve trunks, Matas, Cushing, Gibbon, Lund, Cobb and others have confirmed its value.

SUMMARY.

Every tissue and organ has a more or less individual shock-producing value and must be individually considered. The amount of shock produced by a given trauma varies according to the amount and special quality of nerve supply involved and the number and intensity of the afferent impulses originated by the injury or operation.

Cocain or eucain may wholly "block" these shock-producing impulses. When one or more of the accessory causes of shock are present the highest possible tax is laid on the surgical judgment of the operator. A precise technic offering a minimum of exposure and trauma, grafted on a comprehensive grasp of all the factors entering into the operative consideration, are the ideals for which we must strive.

THE ANTAGONISM OF THE OVARIES AND THE THYROID.—C. Parhon and M. Goldstein (*Archives Generales de Medicine*) review the subject of the relations of the ovarian and thyroid secretions and maintain that a very marked physiologic antagonism exists between them as regards their action on the organism. In support of this opinion they refer to the increase of the thyroid gland as frequently observed at the menopause; the facts that the thyroid seems to favor the normal growth of the osseous system, as shown by its defective development in myxedematous cases, and the contrary action of the ovaries in osteomalacia, as shown by the good effects of castration in that disease; the evident antagonistic action as regards the adipose development, the thyroid secretion being an anti-fat agent, and the normal ovarian functions tending, to a certain degree, toward the growth of adipose tissue. The thyroid favors the growth of hair, which is suppressed to some extent by the influence of the ovaries, as shown by the appearance of hairy growths at the menopause, and their action is also contrary as regards the effects on the circulatory system, the thyroid accelerating the pulse and increasing tension, while the ovarian secretion, they claim, has the opposite effect. They also find similar antagonisms in the regulation of the secretions, in the nutritive metabolism, the output of urates, phosphates, and chlorids, and the elimination of calcium, arsenic, and iodin. The therapy of Grave's disease and chlorosis is also brought into the argument, both being considered by the authors as dependent, at least in many cases, on exaggeration or perversion of the thyroid functions. The question as to whether there exists a similar antagonism between the testicles and the thyroid is suggested as one deserving special study. The authors consider that many facts, such as the effect of castration on the bony growth and the hairy development when performed on young individuals strongly point toward such antagonism.

Special Article

IMMUNITY.

CHAPTER XVII.

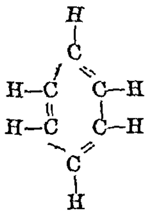
THE SIDE-CHAIN THEORY OF EHRLICH AND ITS RELATION TO THE THEORY OF PHAGOCYTOSIS.

Ehrlich,[1] in 1885, before the discovery of toxins and antitoxins, before there was any knowledge as to the real nature of immunity, and before he had become actively interested in its study, published a small volume on the "Oxygen Requirements of the Body." Herein the belief was expressed that the assimilation of foods by cells is accomplished only after chemical union has taken place between the food substance and some constituent of cellular protoplasm. It is not the understanding that assimilation is at an end, however, when this union has occurred, for certain molecules of complex chemical nature and of great size must be split up into simpler substances before they enter into the composition of protoplasm. Therefore, the cell constituent which combines with the nutritious molecule serves only as a link to bring the foodstuff into relation with the digestive, oxidizing or fermentative activities of the cell.

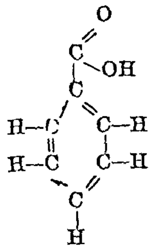
"Leistungskern" and Side-Chains.

Ehrlich speaks of that portion of living protoplasm which represents the cellular activities as the *"Leistungskern"* of the cell, the center of cellular activity, or the central group of protoplasm, whereas those chemical groups which bind the food substances are called the *side-chains of the "Leistungskern."*

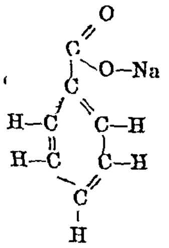
The author of the theory has made his conception somewhat more tangible through an analogy which was drawn with the so-called ring or nucleus of benzol and its side-chains. The molecule of benzol, C_6H_6, has a definite formation in which each carbon atom is linked to two others in such a manner as to form a ring; three valencies of each carbon atom are satisfied in this way, and the fourth is satisfied by atoms of hydrogen, one of which is attached to each carbon atom, thus:



This ring is analogous to the *"Leistungskern"* of the cell. A great variety of chemical compounds exists and very many may be produced synthetically by substituting for one or more atoms of hydrogen, one or more other groups of atoms which may be very simple or very complex. The groups which have been substituted are called side-chains. Thus benzoic acid is formed from benzol by substituting the acid radical COOH for a particular H, and the COOH in this instance is a side-chain of the ring:



Just as the side-chains of the *"Leistungskern"* may combine with food particles, so may the side-chains of the benzol ring combine with other groups of atoms and thereby assimilate the latter, so to say, into the ring. To choose a simple example, the sodium of sodium hydroxid may unite with the side-chain COOH to form sodium benzoate, the hydrogen of the acid radical being replaced by the sodium, thus:



Presumably it is in some such manner as sodium is brought into relationship with the benzol nucleus, in the example cited, that the food substances are brought into relationship with the *"Leistungskern"* of the cell.

Haptophores.

The hypothesis of Ehrlich carries with it the assumption that the side-chains of a cell possess or consist of definite groups of atoms capable of uniting chemically with certain other definite groups of atoms in the food particles; that is to say, the food substances also have combining groups—haptophores. The side-chains of the cells Ehrlich now calls receptors, elements which we have already recognized in connection with immunity. Inasmuch as different foods have different chemical compositions, it is likely that their binding groups are not identical; and if this be true there must exist many kinds of receptors each of which is able to unite only with that food substance which has a corresponding binding group of atoms.

In contrast to the condition with respect to foods, it is held that chemical substances of known composition, drugs and alkaloids never become incorporated as a part of the protoplasm, that is, they do not unite with cell receptors, although they may affect the vitality and function of protoplasm profoundly. Their inability to yield antibodies as a result of *immunization* is supposed to depend on this condition. Such substances, according to Ehrlich, exist in the cell in a condition of unstable salt formation with some constituent of the protoplasm, or in a state of solid solution.

The following statement from a recent publication by Ehrlich summarizes the nutritional aspect of the theory: "We must assume that all substances which enter into the structure of protoplasm are fixed chemically by the protoplasm. We have always distinguished between assimilable substances which serve for nutrition and which enter into permanent union with the protoplasm, and those which are foreign to the body. No one believes that quinin and similar substances are assimilated, that is, enter into the composition of the protoplasm. On the other hand, the food substances are bound in the cells, and this union must be considered as chemical. One can not extract a sugar residuum from cells with water but must first split it off with acids in order to set it free. But now such a chemical union like every synthesis, demands the presence of two binding groups of maximal chemical affinity, which are suited one to the other. The binding groups which reside in the cells and which bind food substances I designate as side-chains or receptors, while I have called those of the molecules of foodstuff the haptophorous groups. I also assume that protoplasm is endowed with a large series of such side-chains, which through their chemical constitution are able to bind the different foodstuffs and thereby provide the prerequisite for cellular metabolism."

Side-Chain Theory of Immunity.

If the side-chain theory of nutrition is to become the side-chain theory of immunity it is necessary that it undergo elaboration in order that the formation of antibodies may be adequately explained. If, as Ehrlich assumes, the union of toxin with cell receptor is analogous to the union of food substances with similar receptors, one may wonder that antibodies are not formed for our *ordinary* foods, antibodies which would be discharged from the cells and which would *unite with circulating* nutritious *particles* and thereby bring about a condition of starvation. Without *entering into the intricacies* of this question, *it seems probable* that normally a condition of physiologic equilibrium exists between the *food* substances on the *one* hand and the cellular activities on the other, so *that the* union of *food* with protoplasm constitutes *no* abnormal stimulus to the *"Leis-*

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tungskern" of the cell. When, however, cells are diverted from their normal metabolic function by union with toxins and other abnormal "food substances," the result on the cell is described as a cell defect, the defect consisting of the functional elimination of the receptor. The "*Leistungskern*" as the vital or regulating center of the cell repairs the defect by the formation of new receptors, and in harmony with the hypothesis of Weigert produces not only enough to repair the defect, but a great excess, with the result that many are thrown into the circulation. The analogy of the "*Leistungskern*" with the benzol ring can not be carried to this extent, for the latter has no power of reproducing side-chains to take the place of one which has been bound by some new group of atoms.

Tenets of Ehrlich's Theory.

It will be appropriate in this place to consider the character of the proof which has been offered in support of the three tenets which constitute the framework of the theory of Ehrlich. These three tenets may be expressed as follows: 1. Antitoxins counteract toxins by entering into chemical union with them; a similar union takes place between other antibodies and their homologous substances. 2. Toxins in injuring cells combine chemically with a definite constituent of the protoplasm, the cell receptor; other antigenous substances[2] enter into similar union with the appropriate receptors of cells. 3. The specific antibodies of the serum are new formed receptors identical in structure with those which, as cell constituents, had combined with the homologous antigen.

Union of Chemical Antibodies with Antigens.

First tenet: In the early days of studies on immunity (1890-1897), the action of a toxin and the efficacy of an antitoxin could be determined only by injecting these substances into living animals, and the animal experiment naturally continues to be the means of testing the curative and prophylactic value of serums. So long, however, as such experiments were performed exclusively in the living animal the nature of the action of antitoxin remained to a certain extent in doubt. It remained uncertain whether antitoxin is protective because it actually destroys the toxin, because neutralization of a chemical nature occurs, or because in some manner it increases the resistance of the inoculated animal. In Chapter IX experiments were cited to show that antitoxin does not destroy the toxin, and this is generally admitted to-day. There continues to be some difference of opinion, however, in relation to the other two possibilities, i. e., as to whether antitoxin combines chemically with toxin, or is efficacious because of its stimulating power on the tissues of the animal. Behring, the discoverer of antitoxin, was from the beginning an exponent of the chemical theory, even at a time when the conceptions of Ehrlich had not been fully developed. On the other hand, certain noted investigators, especially Roux and Buchner, and later Metchnikoff, stood for the alternative view.

Ricin and Antiricin.

Following closely on Behring's great discovery Ehrlich studied the hemagglutinating toxin ricin, from the castor-oil bean, and by immunization with it produced a specific antitoxin, i. e., antiricin. Ricin is toxic to erythrocytes both in the animal body and in the test-tube, and if it could be shown that antiricin protects in the test tube by a direct effect on the toxin, it was highly probable that its action in the animal body would be of a similar nature. It was, of course, possible that the antitoxin might increase the resistance of the erythrocytes through some effect on them, but this possibility was eliminated, supposedly, by first treating the corpuscles with certain chemicals. The results left no doubt in the mind of Ehrlich that antiricin unites chemically with ricin, and the applicability of this principle in animal experiments became all the more apparent when it was shown that the proportion of antiricin which protects *in vitro* also protects *in vivo*.

Chemical Neutralization of Toxins.

It is held that similar proof of chemical union between bacterial hemolysins, the hemolysin of venom and the leucocidin of the staphylococcus with their respective antitoxins is equally valid. Although the animal body can not be dispensed with in testing the action of the antitoxins of diphtheria and tetanus, certain principles of chemical action are found to prevail which leave no doubt in regard to the chemical neutralization of the toxins. If neutralizing proportions of diphtheria toxin and antitoxin be mixed in a test tube and injected immediately, the serum does not afford absolute protection; if, however, the mixture is allowed to stand for from fifteen to twenty minutes before injection, the protection is absolute. This alone would point to an action of the antitoxin on the toxin, for the completion of which a certain amount of time is required. For the complete neutralization of tetanus toxin by its antitoxin about forty minutes are necessary at ordinary temperatures. Then certain other chemical principles described in Chapter IX are found to hold true: That neutralization proceeds more rapidly at higher than at lower temperatures, more rapidly in concentrated than in dilute solutions, and that it takes place in accordance with the law of multiple proportions.

Granting, then, that neutralization of toxin by antitoxin is of a chemical nature, the first essential step in the chemical or side-chain theory is established. If antitoxin combines chemically with toxin, union must occur through combining groups which each molecule possesses. Herein lies the experimental justification for assuming the existence of haptophorous groups.

Union of Agglutinin and Amboceptors with Receptors.

The situation is more difficult in regard to the union of agglutinin and amboceptors with their homologous receptors. One can not titrate bacteria against agglutinin or bactericidal amboceptors so exactly as toxin can be titrated against antitoxin, for, in the first place, it is difficult to obtain at will a desired concentration of bacteria and to keep it without alteration, and, in the second place, bacterial cells contain many more receptors than are necessary for their agglutination and solution. A given mass of bacteria will take up varying quantities of agglutinin, depending on the concentration of the latter, and the same principle applies to the absorption of bactericidal and hemolytic amboceptors. As more and more agglutinin is added, the total amount absorbed increases with each addition, although the ratio of absorbed to unabsorbed agglutinin grows less continuously. The conditions which govern this phenomenon are not understood, although it has been suggested that the law of mass action explains it. Perhaps no condition speaks more decisively for chemical union of these bodies with cell receptors than immunization experiments which were carried on with cells which had been treated with a great excess of the specific antiserum. The assumption was made that if one could force all the receptors of erythrocytes, for example, to take up the specific amboceptors, such corpuscles should lose their power to cause the formation of hemolytic amboceptors when injected into a suitable animal. This would follow logically, for the receptors of the corpuscles, being already bound, would not be free to unite with receptors of the immunized animal. Antibodies were not formed under these circumstances, from which it is concluded that the receptors of the erythrocytes had united chemically with the antibodies of the serum (Sachs). In order to completely occupy all the receptors of the vibrio of cholera Pfeiffer used 3,000,000 to 4,000,000 times the dissolving amount of the anticholera serum. Although the mere absorption of agglutinins and amboceptors by the homologous cells is cited in favor of the chemical hypothesis, we may bear in mind the contention of certain investigators that this absorption is physical rather than chemical.

Chemical Union of Toxins and Antibodies with Cell Receptors.

Second tenet: What evidence have we that toxins and other antigenous substances enter into chemical union with cell receptors It is probable that no observation speaks more strongly in favor of such union than a famous experiment of Wassermann's in which the central nervous system of guinea-pigs was ground up with tetanus toxin, the mixture allowed to stand for a short time and then injected into mice. The mixture was found to be non-toxic, and further experiments showed that the neutralizing power resides in the solid tissue in the emulsion. It is claimed by Ehrlich that this experiment demonstrates positively that chemical union of tetanus toxin takes place with constituents of the nervous tissue. The toxin having been completely neutralized can not again be extracted from the tissue. The condition is the opposite in relation to some poisonous alkaloids, as strychnin, which it appears does not combine with the protoplasm firmly and may again be extracted by simple methods.

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[2] An antigen or an antigenous substance is one which is able to cause the formation of an antibody.

Von Dungern conducted very important work with the precipitins, which is interpreted as showing that albuminous substances other than toxins are taken up chemically by the cells. e injected considerable quantities of a foreign serum into the veins of rabbits and studied its disappearance from the blood of the injected animal. Traces of the foreign serum could be recognized by treating the rabbit serum with a specific precipitin for the former, the precipitin having been obtained previously by the immunization of other animals. The foreign serum disappeared from the circulation of the rabbit with some rapidity and since it could not be demonstrated in the excretions, it seemed necessary to assume that it had been bound by the cells, that is to say, by the cell receptors.

(*To be continued.*)

Clinical Reports

CASE OF TETANUS, WITH RECOVERY FOLLOWING OPERATION.

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WASHINGTON, D. C.

The approach of the Fourth of July and the interesting editorial in The Journal, June 10, on the treatment of tetanus prompt me to submit a brief history of a patient operated on by me in Gouverneur Hospital, New York City, in the fall of 1885. The case was fully reported in a paper read before the Society of the Alumni of Bellevue Hospital shortly afterward, and was, in fact, among that society's earliest papers.

It was my belief at that time that tetanus was due to a peculiar type of infection in wounds, and that the result of the infection was an "irritation" to the nerve filaments supplied to the wound, and that this "irritation" was carried through the nerves to the cord, which, in turn, manifested the extent of transmitted "irritation" by the character of the tetanic convulsions developed. The discovery of the tetanus bacillus by Nicolaier in 1884 was not known to me at that time. The treatment in this case was planned in accordance with the foregoing theory of the origin of this disease.

Patient.—Male, aged 23, a carpenter by trade, while at work on an outside window frame, had an epileptic seizure, fell to the ground and sustained a contused wound, high up in the occipital region, on the right side. The wound was dressed at a dispensary and appeared to do well for three or four days. On the fifth day I saw the patient at his home, when he showed marked stiffness of the muscles of the neck and trismus, and while I was removing him to the hospital he had his first convulsion, a typical opisthotonos. The convulsions rapidly increased in frequency and severity and bade fair rapidly to exhaust him. The case appeared to be pronouncedly acute and hopeless.

Treatment.—The patient was anesthetized with chloroform, the entire scalp was shaved, and the wound, which was about the size and shape of a half-dollar and infected, was curetted and cleaned out down to the bone with knife and scissors. This cavity was packed with gauze saturated with a solution of carbolic acid. The supposed source of the "irritation" was in this way removed. The nerves—the channels by which the "irritation" was supposed to reach the cord—were completely cut off from the wound area by a liberal V-shaped incision, angle downward, carried to the bone, and extending well beyond the site of the injury. The arms of the V-shaped wound were packed to th [illegible] gauze soaked in a weak solution of cocain to relieve the proximal ends of the nerves from supposed "irritation." In addition, the patient was treated symptomatically with particular attention to catharsis and nourishment.

Result.—Most surprising results followed this treatment. Within twenty-four hours the convulsions became decidedly less exhausting and less frequent and by the tenth day had practically ceased. On the fourteenth day, however, while turning over in bed, the patient accidentally touched the slats of a shutter, and bright sunlight fell on his face, bringing on a tetanic seizure, his last, which nearly cost him his life. He made an uninterrupted recovery, stiffness of the jaw persisting for some days, however.

As the absorption of the cocain solution could not be controlled, its use was discontinued after a few applications and a moist antiseptic dressing was substituted.

In a region where the division of nerves is of comparatively little moment I believe the foregoing plan of treatment is indicated, supplemented by the use of antitoxin in the spinal canal, beneath the skin, and in the wounds in place of the cocain solution as employed by me.

The necessity for collecting the scattered notes of cases justifies this brief report.

TRANSPOSITION OF THE VISCERA (SITUS TRANSVERSUS).

W. J. ZALESKY, M.D., and W. A. ANGWIN, M.D.,
Assistant Surgeons, U. S. Navy.
ANNAPOLIS, MD.

Cases of complete transposition of the viscera are still rare enough to be classed as curiosities and each case reported is of interest if only because of that fact. We have the following case to add to the list:

Patient.—J. W. B., U. S. Navy, native of Texas, aged 18.

History.—Parents are both living and in good health; two brothers and one sister are living, also in good health, and with all viscera in normal position. The patient has had all the diseases of childhood, from which he made a good recovery. At the present time he is well built, strong and active, and able to do any kind of work and stand any hardship in the curriculum of a naval training. His condition was first noticed by one of the naval medical officers while on recruiting duty, and before whom the patient appeared for physical examination. Being physically strong, and in the best of health, this transposition could in no way interfere with his appointment to the navy.

Examination.—Inspection shows a marked apex beat in the right fifth intercostal space, two and one-half inches from the sternum. The chest is well formed, and the right testicle is suspended lower than the left one. Percussion shows heart dullness on the right side, but liver dullness increasing and extending to the left side, with diminished liver dullness on the right side. The percussion area of the heart on the right and the liver on the left side is identical with that of a normal person on the respective opposite sides. Splenic dullness and stomach resonance are found to be on the right side instead of on the left. X-ray examination confirms the physical examination, the beating heart being easily seen occupying the right side of the chest. Reasoning from analogy, the appendix is on the left side, and the sigmoid flexure on the right. Curious to note, in addition, is the fact that the patient is right handed, but whether from training or not we are unable to find out.

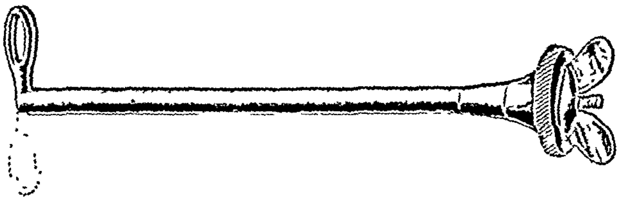
United States Naval Academy.

New Instruments

A NEW PROSTATIC TRACTOR.

M. R. BARKER, M.S., M.D.
CHICAGO.

The tractor is introduced closed into the bladder, through a slit in the membranous urethra, and is then opened by turning the thumb-screw five or six times to the left. Then slide the large nut back to the thumbscrew, and hold it with the right hand while the shaft is turned to the left with the left hand until the groove on the nut is in line with the groove on the shaft. Then slide the large nut back to its place and lock by turning the thumbscrew to the right. The end of the tractor is now elevated and the instrument is used as a lever; the pubes being the fulcrum of the lever and the prostate the body moved. This maneuver brings the broad flat surfaces of the blades of the instrument in contact with the bladder wall through which the force must be applied to the prostate. The tractor is taken apart for cleaning by simply removing the thumbscrew.



Tractor closed for introduction into the bladder. Dotted lines show the tractor open after being introduced into the bladder.

The advantages of this instrument are as follows: It is easily understood and manipulated. It can not get out of order. The danger of injuring the bladder wall is reduced to a minimum.

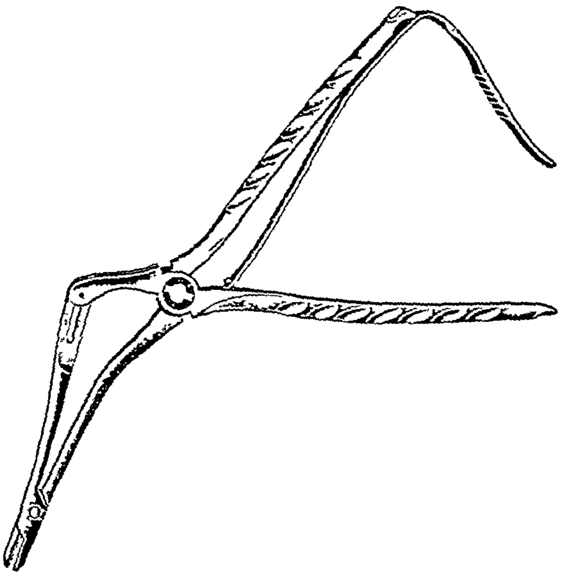
4625 Greenwood Ave.

PISTOL-GRIP NEEDLE FORCEPS FOR ABDOMINAL SURGERY.

EDGAR CALVIN SEIBERT, M.D.

Assistant Surgeon Orange Memorial Hospital.
ORANGE, N. J.

The placing of sutures in the deeper regions of the abdominal cavity has always been a matter of especial difficulty in abdominal surgery. Owing to the prevailing straight construction of needle forceps, the operator's hand not only must be held at an uncomfortable angle, but also greatly obscures his vision.



For surgical work in the nasal, aural and vaginal cavities, great advantage and perfect visual control is derived from the use of curved or angular instruments.

Having this in mind, I have had constructed a "pistol-grip" needle forceps whose jaws are at an angle of thirty degrees to the handles, which permits a full unobstructed view of the operative field and gives perfect control of the needle even in the deeper and less accessible regions of the abdomen.

In order to provide the power necessary to hold the needle securely, two levers are used, one acting on the other, thus greatly increasing the grasping force of the jaws. Consisting of only four parts which are simple and easily detached, the instrument is readily made aseptic. The jaws have serrated surfaces which are best adapted to grasp straight or curved intestinal needles in any position. A later model has more fully curved handles which give a broader grasp and a better purchase to the hand. French locks on both joints afford additional strength and security. The spring lever for the little finger which opens the catch has a rough serrated surface which guards against slipping of the finger.

This instrument, because of its angle, will be found especially valuable for operations on the stomach, gall ducts, pancreas, kidneys and ureters, and intestines; and particularly so in bringing together peritoneal surfaces after removal of organs in the pelvic cavity. It is equally useful in operations on the cervix and vagina or, in fact, wherever the depth of the operative field makes a full unhampered view of all procedures desirable or necessary.

PRELIMINARY ANNOUNCEMENT OF A NEW INSTRUMENT TO BE USED IN PHOTOTHERAPY.

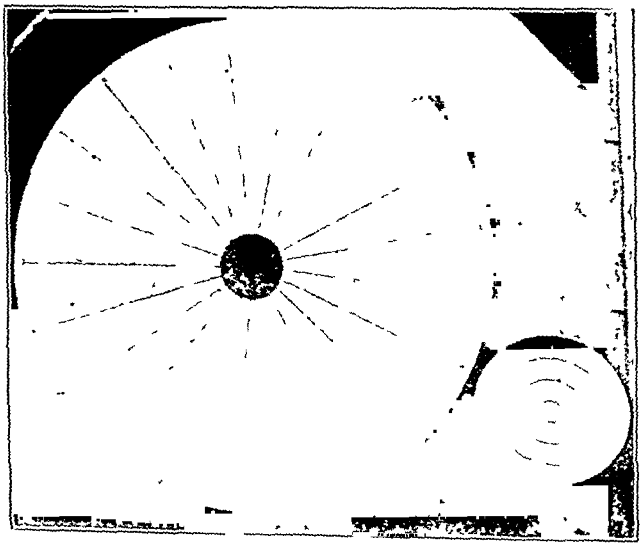
J. W. KIME, M. D.

Superintendent Boulder Lodge Sanatorium for Tuberculosis.
FORT DODGE, IOWA.

During the past six years in which I have made use of light in the treatment of tuberculosis in its various forms I have constantly felt the need of a much more intense light than any that has yet been produced.

I believe that it is impossible to obtain a light from any source, except the sun, that is sufficiently powerful to accomplish what we desire in this direction. The electric arc light is exceedingly limited, but, with the sun as our source of supply, the amount of light is unlimited, and that which we may utilize depends wholly on the size and construction of the apparatus used to gather up the light.

The illustration shows the mirror which I now use and the relative proportion of one now nearing completion. The smaller is three feet in diameter and contains an area of seven square feet, while the larger has a diameter of ten feet and contains an area of seventy-eight square feet. It is so constructed that all the light falling on the entire surface is concentrated on an area of one-fourth of one square foot. In this manner, sunlight is piled up to an intensity three hundred times that of ordinary sunshine.



Such a light would ordinarily be accompanied by heat of corresponding intensity. Provision has here been made for the absorption of this heat, leaving the light in its full strength by passing the concentrated sunlight through twelve inches of cold water which is flowing through a cooling tank with plate-glass sides.

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EXPERIMENTAL INOCULATION OF MONKEYS WITH SYPHILIS, LEPROSY AND TUBERCULOSIS.

In order to study disease in detail, especially those due to pathogenic organisms, experimental reproduction in animals is of the greatest importance. A brief consideration shows at once that, on the whole, those diseases that may be reproduced in animals are far better understood and controlled than those which can not thus be transmitted. It is, therefore, with much interest that we note the further success attained in the experimental inoculation of monkeys with syphilis.

In their last report, Metchnikoff and Roux[1] describe their further experiments in this fertile field. Altogether they have inoculated ten chimpanzees with syphilitic virus from various sources and have obtained positive results in all cases. Successful results were obtained by using material from secondary lesions of the disease, as well as from the primary lesion, and one chimpanzee has been successfully inoculated from lesions of another, thus establishing the possibility of transmission from animal to animal.

The incubation period varied in these experiments from twenty-two to thirty-seven days. Some days following the primary lesion adenopathy developed in a characteristic manner and the investigators also obtained typical mucous patches on the tongue in one instance. Smaller monkeys were successfully inoculated with the virus, and attempts have been made to produce antibodies and also to obtain a vaccine, but so far the experiments in this respect have been negative. The fact, however, that successful inoculation may be obtained with these smaller animals is of great importance, in that material for further work along this line may be comparatively easily obtained and thus greatly increase the number of investigators.

Metchnikoff and Roux were also able to demonstrate that the virus of syphilis does not pass through a Berkfeld filter, which allows the organisms of peripneumonia to pass, indicating that the virus in all probability exists in molecules large enough to be seen if only the proper technic is employed. They were also able to show that the virus is killed by exposure to 51° C. for one hour, and that glycerin does not destroy its pathogenic power. These facts enabled them to attempt an attenuation of the virus for purposes of vaccination, but the few experiments so far made have resulted negatively.

The importance of this work on syphilis can scarcely be overestimated. Here is a disease recognized as one of the most widespread scourges of the world, and about which practically nothing is known so far as etiology is concerned. Suddenly, largely through the work of these French investigators, this disease has been brought within the realm of experimental medicine, and certainly we expect our knowledge of the disease to be greatly extended within a short period of time.

In this connection it is of interest also to note that an apparently successful attempt has been made to inoculate monkeys with leprosy. Nicolli[2] inoculated into monkeys (*Macacus sinensis*) fragments of leprous tissue and obtained, after a period of incubation of sixty-two days, nodules which have the characteristics of human leprous nodules. The bacillus of leprosy was found in the nodule by suitable staining methods in rather small numbers. None of the large leprous cells filled with enormous masses of bacilli, which appear in the human, was seen, this really being the only difference observed between the nodules in man and in the inoculated animal.

Further experiments are in progress along much the same lines as those being carried on with syphilis. We, therefore, have good reason to hope that this disease, about which so little is known, will also become accessible to experimental research.

It is well known that monkeys are very susceptible to tuberculosis and this fact has been taken advantage of in attempting to determine the relation of bovine to human tuberculosis. Because they are more closely related to the human being zoologically than any other animal, the experimental results obtained with them are, for that reason of greater value than results obtained with species farther removed from man, and because of the impossibility of inoculating the human species with the bacilli; the inoculation of monkeys furnishes the most direct experimental evidence possible on the question of the transmissibility of bovine tuberculosis to human beings.

De Schweinitz, Dorset and Schroeder[3] recently succeeded in producing generalized tuberculosis in seven monkeys by both feeding and inoculation experiments, using tubercle bacilli of both human and bovine origin. They conclude from this, and also from other evidence, that there is every reason to believe that bovine tuberculosis is communicable to man, and that the only difference between tubercle bacilli of human and bovine origin is one of virulence. Nocard, Cipollina and others have obtained similar results.

These experiments with monkeys indicate the important rôle these animals may play in experimental work in the future.

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[1] Annal. Past. Inst.,

[2] Comptes Rend. Acad. Sciences, vol. cxl, No. 8.

[3] U. S. Department of Agriculture, Bureau of Animal Industry, Bull. No. 52, Part II.

THE SOCIAL TRAINING OF THE PHYSICIAN.

Education is something more than the accumulation of facts. True education, along any particular line, involves more than the perusal of certain texts or attendance on a course of prescribed lectures or demonstrations. Training for any particular calling or vocation, to be of the highest utility, should include all lines which are necessary for the attainment of success. This necessitates instruction not only in the theory and principles, as well as the technic of one's future work, but also should involve training in regard to those future relations to one's fellows which are often of more importance to progress and success than exhaustive knowledge and precise technical ability. These self-evident truths were recognized, years before the development of modern psychology and pedagogy, by the United States Government, in the management of West Point and Annapolis. At these two academies, which have stood for years as models of what technical institutions should be, the young cadet, as a future officer of the army and navy of the United States, is taught not only mathematics, chemistry, military tactics and gunnery, but riding, swimming, fencing, boxing and dancing, French, German and Spanish as well. The fact is recognized that each graduate must have all the training that is necessary to enable him to meet and to associate not only with other officers of the army and navy of his own country, but with military and naval officers of any other country.

The enormous increase of detail in all scientific and technical lines in the last twenty-five years, has so broadened the field of modern education that practically all of the student's time is occupied in acquiring data for his future work. This is particularly true in medicine. Necessitated by the rapid increase of medical knowledge, the course has been lengthened from two to three and then to four years. It is still inadequate and five year courses are now being planned; and yet the modern medical student does not receive as much instruction on medical ethics and professional etiquette as did his predecessor of thirty or forty years ago. He leaves his alma mater, an individual instructed in the latest results of scientific research, but still an isolated individual, with little idea of his duties as a member of a profession or of his responsibilities, either to his brother practitioner or to his lay neighbor.

In no other way can we account for the apathy among the young men, the recent graduates, in regard to professional ethics and medical organization. The existence of this indifference has been noticed in both country and city and in different localities. In the organization columns of this issue, will be found an article by Dr. J. N. McCormack, on local conditions among the medical profession in Pennsylvania. In enumerating the difficulties encountered in this, one of the oldest states in the Union, from the standpoint of medical organization, Dr. McCormack emphasizes the apathy and indifference of the young man in the profession as one of the greatest obstacles in the way of successful organization. He clearly points out that the student of to-day, practically without exception, leaves his college with no adequate training for his future work, so far as his relations to his fellows and his duties to society at large are concerned; and yet every successful practitioner knows that these are at least as great, if not greater factors, in winning success, as are technical training and exhaustive knowledge of scientific facts. It is also a well recognized fact that the standing and influence of the medical profession depend on the material success and financial independence of its members. A poverty-stricken and ill-paid profession can never wield the influence for its own good and that of the community at large, that could be exercised by an independent, self-respecting, adequately paid profession.

Instruction in all those factors that make for the highest success, is the right of every medical student and should be the duty of every medical teacher. Necessarily, instructors in medical schools are drawn from the ranks of successful, and therefore, busy practitioners. They are not experts in pedagogy nor in sociology, yet they can profit by the results of modern thought and development along educational lines. We need. in our medical schools, not less fact or less practical instruction, but more instruction of the future physician in regard to his duty to the profession at large and to its individual members, as well as his duty as a citizen-physician. An adequate course of lectures, to senior students, given by some broad-minded and experienced member of the faculty should be on every medical college schedule. Not only medical ethics and the etiquette of intimate professional relations, but medical organization and the advantages of co-operation, as well as the peculiar duties of the physician as a member of modern society, should be carefully and earnestly discussed. Then the young and inexperienced graduate could begin his professional career, with that conception of his professional responsibilities and duties that is indispensable to true success.

THE DIAGNOSTIC SIGNIFICANCE OF THE BABINSKI TOE PHENOMENON.

One would imagine that after hundreds of years of clinical observation the signs of disease would all have been discovered. Such is not the case, for every year new diagnostic signs, and even new diseases are described. Some of these signs, after being tried and found wanting, pass back into the oblivion from which they originally emerged, others stand the test, and become incorporated into the routine of the physician. Among the latter may be mentioned the sign originally described by Babinski in 1898, and now usually referred to as "Babinski's sign" or "the toe phenomenon of Babinski." The phenomenon was originally described by Babinski in the following words: "On the healthy side, the prick of the sole of the foot causes under normal circumstances a flexion of the thigh on the pelvis, of the leg on the thigh, of the foot on the leg, and of the toes on the metatarsus. On the paralyzed side a similar excitation gives rise also to flexion of the thigh on the pelvis, the leg on the thigh, and the foot on the leg, but the toes instead of flexing execute a movement of extension on the metatarsus."

The significance of this sign, as originally pointed out by Babinski, lay in the fact that it supplied, what had hitherto been lacking, a sure means of differentiating certain organic lesions of the central nervous system from functional lesions which closely simulated them. In hemiplegia, for example, it has always been difficult to differentiate hysterical from organic cases in some circumstances, and the character of the ordinary reflexes offered but little aid. The Babinski phenomenon, however, never occurs in hysterical hemiplegia, while at is very common in organic hemiplegia, and appears very shortly after the stroke. In differentiating between hysteria and early or atypical cases of disseminated sclerosis also, the sign is of the greatest value as Byrom Bramwell[1] has recently pointed out.

Continued study of the sign has shown, as would have been expected, that it is not so limited in occurrence as Babinski at first thought; it has been demonstrated, however, that in the main the original statements regarding the value of the phenomenon are to be relied on. It has been shown that the sign occurs normally in infants up to the age of one year, a discovery which detracts nothing from its usefulness; and also, that it may occur temporarily after various forms of convulsion, epileptic or uremic for example. Here, again, it serves to distinguish disease on an organic basis from hysteria, for it does not occur after convulsions of an hysterical nature. It may also occur temporarily as a result of tetanus or of strychnia poisoning.

Naturally there have been those who claim that the sign is inconstant, uncertain, and of relatively little value. Generally a study of the writings of such individuals will show that they have failed to carry out the technic necessary to bring out the sign, or that they have overlooked the fact that under certain circumstances it fails to appear. When the feet are cold and damp, or when the patient has been standing some time the sign may be absent. Then, again, the position of the patient may be of great importance, especially when the sign is not well marked. In typical cases the sign is easily elicited with the patient on his back and the legs extended, but in less typical ones it is necessary to have the patient lying rather toward the side to be tested, with the thigh and leg both flexed to about a right angle, and the outer surface of the limb resting on the bed. Then, again, the degree of plantar stimulation which is necessary varies in different cases; in general, stimulation of the outer part of the plantar surface or of the ball of the toe leads to the best results. If every precaution be taken in performing the test, and with all precautions it is not a difficult one, good results are bound to be obtained. So far the use of the test has been too much limited to the neurologists, but it is so simple, and gives such valuable information, that it is to be hoped it will be more extensively used by the general practitioner.

THE PROPHYLAXIS OF FOURTH OF JULY TETANUS.

In a previous editorial we discussed the important work that physicians can and should do in suppressing the annual Fourth of July nuisance through legislative and educational measures. This is the most hopeful way of striking at the root of the tetanus epidemic, and the only one which will lead to permanent results, but we are as yet much too far from the civic millenium to hope for a total suppression of Fourth of July indiscretions and injuries for many years to come. We must prepare to face a few thousand useless injuries and a few hundred unnecessary deaths, and the responsibility as to the outcome of a large part of these injuries is put on the physicians. It is unnecessary to insist that the chief danger to be feared is tetanus, which has ever shown a remarkable frequency after Fourth of July wounds. Whether tetanus is so frequent because certain blank cartridge wads contain tetanus bacilli or simply because the nature of the wound and the conditions under which it is generally received favor infection with tetanus bacilli present in the dirt of the street is a matter of minor importance when the case is at hand.

It is, then, important that every penetrating or lacerated wound received from explosions of instruments of celebration is a very possible site of tetanus infection, and also that these wounds present certain anatomic peculiarities that render their treatment no simple matter. The small, clean-cut wound in the skin made by a blank cartridge wad gives no idea of the serious nature of the destruction that has gone on beneath, and which is difficult of conception by one who has never dissected out such a wound.

Beneath the tough skin of the hand, where most of these wounds are received, the explosive force tends to spread laterally along the course of the tendons and their sheaths, so that particles of powder and dirt may be found several inches away from the site of the injury. The penetrative power of the wads is also seldom appreciated—they may pass from the palmar surface entirely through the hand to lodge beneath the skin of the dorsum; there is one case on record in which a wad passed through the abdominal wall and penetrated the intestine. Hence, the proper cleansing of a blank cartridge wound is not a simple matter, but, in general, is a procedure that calls for full anesthesia and some surgical skill, a fact difficult to impress on the patient, and formerly too little appreciated by the family physician. Drainage with a strand of gauze, even if the wads have been successfully picked out of the bottom of the wound, is entirely inadequate treatment; the entire wound track must be thoroughly cleaned and opened widely to permit of free drainage, exposure to air through porous dressings, and healing from the bottom.

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[1] Clinical Studies vol. iii, part 3, 1905.

Last year we received, on a grand scale, a demonstration of the efficiency of tetanus antitoxin as a prophylactic. Previously, there had been several instances of the checking of hospital epidemics, or of stable epidemics among horses, by this means, but there has probably never been so large an experiment performed as this. That it was successful the figures prove beyond a doubt. We have yet to learn of a single instance in which a patient with a blank cartridge wound who received a prophylactic injection of antitoxin later developed tetanus, although there were instances enough of such wounds not so treated that were followed by tetanus. Having, therefore, an almost positive and harmless preventive of tetanus at our disposal, there is no apparent reason why it should not be used in every case of this dangerous class of injuries. Last year most of the large hospitals and dispensaries adopted this measure with the best of results. It now remains for the private practitioner, particularly in the smaller towns, to insist on the necessity for immediately securing antitoxin from the nearest source of supply. As a prophylactic dose, from 5 to 10 c.c. injected subcutaneously, preferably in the vicinity of the wound, is sufficient; the amount depending on the age of the patient, although there seems to be no danger from large quantities. If this is done universally, we may confidently expect to see the great saving of life recorded last year repeated and increased this year, with the deaths from tetanus practically limited to those whose wounds did not receive medical attention until the symptoms of the disease had already appeared.

MUTUAL MISUNDERSTANDINGS AMONG MEDICAL INVESTIGATORS.

Medical men, noted for their broad sympathies, for their charity and for their magnanimity, are human nevertheless, and have human imperfections. It must be admitted that they sometimes misunderstand their colleagues and are misunderstood by them. From time to time we hear of conflicts arising, even among medical investigators; mutual misconceptions and erroneous interpretation lead occasionally to disturbances of harmony. Let us examine a little more carefully into the nature of some of these conflicts and ascertain, if we can, how they have arisen, whether or not their existence is justified, and what steps, if any, may be taken to bring about reconciliation.

Among the tendencies to conflict observable among medical investigators a rivalry may first be mentioned between workers in biology, physics and chemistry and investigators who believe that they employ other methods in their work; second, a struggle between non-medical scientists on the one hand and medical men on the other regarding medical problems or problems related to medicine; and, third, a strife between morphologists, who study form, and physiologists, who study function. Though to a certain extent all three conflicts probably exist, the first and second, which are perhaps most noticeable, are the least significant, and the third, which may be least conspicuous, we think, is most deeply rooted. The fact that one contestant may engage not only in one but in two, or in all three of the conflicts, doubtless accounts for the fact that many find difficulty in forming a clear conception of the situation.

If one inquires into the origin of the conflicts mentioned, we think he will find that in each case the principal motive is the contestant's interest in the valuation of certain phases of knowledge—his desire for their good induces him to enter the lists in their defense. On the other hand, the chief incentives to conflict lie, we believe, in the reciprocal misunderstandings of the combatants. Further, it is possible that, occasionally, a competitor may be driven on by transitory impulses of jealousy or of envy; the enmity in the one instance being prompted by fear, in the other by covetousness. If one asks himself, if there should be such conflicts, he can not but answer in the negative; they are unconformable to common sense and no real reason for them exists.

While the motives inspiring the conflicts generally may be good, the immediate incentives thereto and the impulses concerned are too often bad. The non-medical scientist, on the one hand, sees in medicine a field in which the principles and facts of the basal sciences are capable of much more extended application than has yet been made. He is impatient that the exact and rational methods of the laboratory may quickly replace what he regards as the haphazard, empirical routine of "long-distance diagnosis" and "shotgun polypharmacy." The medical practitioner, on the other hand, sees living, suffering human beings, whom it is his duty and desire to help and to comfort, rationally if he can, but merely empirically if he must. He chafes at the criticism of the pure scientist, realizes how little, often, the latter understands more strictly medical problems; he accredits to him such general propositions as "electricity is life" and laughs at them; regards the suggestions from the laboratories as interesting in theory but sterile for practice; and resents, quite properly, the statement so frequently and thoughtlessly made, that the work of a laboratory man is scientific, and that of the practitioner is not.

Again, biologists, physicists and chemists, who work at medical problems, too often forget that the great mass of even the chemical and physical facts of the medical sciences have been discovered by physicians themselves. It is just as true that medical men forget that the methods that they use every day are those of physics and chemistry. The conflict between the students of form and the students of function, as has been said, is probably more deeply rooted, for here the interest of each partisan is often beyond the comprehension of the other. Great morphologists, like Virchow, it is true, have appreciated the importance of physiology, and great physiologists, like Ludwig, have had a sympathetic feeling for form. Frequently, however, the instigator of structure has no great interest in function, and often the student of processes has but little sympathy with morphologic research. Two distinct and somewhat antagonistic types of mind seem to be concerned. In all these conflicts, if the reciprocal misunderstanding regarding each other's aims and work could be done away with, the main incentive to altercation would be removed. The impelling forces to hostility, we fear, can not help being active, however, at least until men cease to have the common passions; jealousy and envy will not entirely disappear so long as prestige in faculties, among students, in societies and academies, and with the laity is of influence in aiding or in thwarting ambition. It is obvious that the conflicts described are deplorable; since no right rational basis for them exists, and since, instead of them, sympathy and hearty co-operation are desirable, they should be discouraged in every way possible.

What remedies may be suggested? We can not discuss the subject fully at this time, but a few hints may suffice. The greater factor in removing the causes of conflict will undoubtedly be further education—education that will show what we have tried to show, namely, that the conflicts are unconformable to common sense. The pure scientist must learn to respect, more fully than he sometimes does, the medical practitioner. The scientist will do well to acquaint himself more intimately with the physician's problems; when he urges his methods and results on the clinician he should write and speak intelligibly to the average man and not in the jargon of those whom he regards as "the select." The medical man, in turn, must frankly recognize his debt to the sciences fundamental to medicine. The bedside worker may as well acknowledge first as last that the methods which he can most profitably follow are those of the biologist, the chemist and the physicist; he will be very unwise if, as a student, he fail to work long enough in the sciences they represent to understand the principles and to apply them to the solutions of problems that interest him; he should welcome every new method which is given him from any source whatever, provided it can be made useful for the understanding of human suffering or for its alleviation. A similar therapy might well be recommended for the other conflicts. Broad sympathies, consideration for the feelings of others, and, above all, respect for good work of all kinds, will go far to prevent unseemly strife.

A RATHER DRASTIC SANITARY MEASURE.

A state law that has just gone into force in California makes it a misdemeanor to own, lease, let or hire any room for a lodging or sleeping apartment that contains less than 500 cubic feet of airspace "in the clear" for each occupant, and it goes further and makes it also a misdemeanor to be an occupant of such quarters. If this law is enforced there will have to be a general remodelling, not only of lodging houses in the large cities at which the measure is evidently aimed, but also of a large proportion of the private dwellings of the state. The hall bedroom will have to go, and it will not be at all surprising if the state itself is found to be an extensive offender in some of its crowded public institutions. The inflow of "lungers" into the state and the popular anti-tuberculosis agitation have evidently educated the legislators as to the importance of fresh air; the next thing is to educate the house owners and users, and that will be a somewhat larger contract, if the law is to be interpreted exactly as it seems to read.

STATE MONTHLY JOURNALS.

At its recent annual session, the Ohio State Medical Association decided to publish its transactions hereafter in a monthly medical journal that is at once to be established by the Association. The advantages of this plan over the conventional annual volume are so obvious that state after state is creating its own monthly publication.

THE OSTEOPATH'S GOAL.

The public is frequently warned that the attempt of the osteopath to secure the permission to manipulate under certain restrictions is but a stepping stone to securing the right to practice in every way that the regular practitioner does, but without first securing the qualifications that the state has demanded. In Iowa the failure of the State Board of Health to confirm the appointment of an osteopath as local health officer has aroused the fears of these semi-doctors that their death certificates will not be accepted, and this means, according to the one who sounded the alarm, the practical abolition of the practice of osteopathy in the state. If they can not sign death certificates their patients must all get well or else they will have to turn them over to regular physicians when they become moribund, as is the practice of Eddyites and other irregulars. This is unsatisfactory, because the osteopath wants to be a whole physician. We call attention in our Queries and Minor Notes department this week to some testimonials which are evidence that osteopaths are using drugs, contrary to the conditions on which they were licensed. Attention has previously been called to the use of drugs by osteopaths, and it might surprise one who had thoughtlessly accepted as a final statement of creed an "old school" osteopath's condemnation of drugs. Their prejudice against drugs will all pass away when they have been permitted to build up a new school of incompetent practitioners who, without undergoing the increasingly severe tests required by modern medical laws, can impose themselves on the confiding public as fully qualified physicians.

"THE PROFESSION OF GETTING HURT."

In *Pearson's Magazine* for June, Theodore Waters writes entertainingly under the above title about cases of malingering. Because of its excessive number of personal damage suits against the municipality, Chicago is given a "bad eminence." Not much in the article is in the least new to the well-read physician, but it is a pleasure to find that the professional malingerers are being exposed to the sympathizing and rather unsophisticated public; and undoubtedly much good will come from the education of the public perception and conscience. Mr. Waters equally and rightly exposes the "shyster lawyers and the doctors without-the-code," and condemns the benumbed conscience of the public in reference to damage suits against corporations and municipalities. He cites many instances showing the swarm of lawyers that besets every injured person whose accident is reported in the papers. Concerning Chicago, we read: "And by a curious coincidence the clients of many of these law firms have employed the same doctor." In the suits on file against the city "one doctor was found to have been in attendance in over one hundred." These statements grate unpleasantly on the ears of medical readers, but doubtless they are true. However, it is not hazardous to predict that the medical profession ere long will rid itself of this scandal. No physician will be permitted to belong to a medical society who lends himself as a tool to corrupt lawyers and unscrupulous malingerers, and the physician outside the organization soon will be in hopeless plight. The active medical society will watch these cases and make sure that the medical backslider gets his deserts. Then, a sure but slower process, the good medical schools are now graduating few men who will, under any stress, descend to this level, and very soon there will be no medical schools but the good ones. Meantime publicity is the most effective weapon against this as well as against other forms of "graft."

Medical News

CONNECTICUT.

Estate for Hospital.—By the will of the late Wolcott B. Manwaring of Baltimore, practically his entire estate, valued at about $150,000, is left to establish and maintain a children's hospital in the Manwaring homestead, New London.

Injured, Asks Damages.—Dr. Morris D. Slattery, New Haven, who was injured by being thrown from his buggy April 7, by reason of an unprotected excavation in a street, has filed a claim against the city of New Haven for the damages sustained by him, his horse and his carriage.

April Deaths.—There were 1,347 deaths during April. This was 229 less than in March, and 30 less than in April, 1904, and is equivalent to an annual mortality of 16.6 per 1,000. Nervous diseases, pneumonia, heart disease and consumption, in the order named, headed the list of death causes.

Old Practitioners Honored.—At the 113th annual meeting of the Middlesex County Medical Association held at the home of Dr. Miner C. Hazen, Haddam, the host in commemoration of the fifteenth anniversary of his entrance into practice, was presented by the association with a cut-glass and silver cigar jar suitably inscribed and filled. Dr. Gurdon Werdsworth Russell, Hartford, received many felicitations on his ninetieth birthday anniversary. He is still in active practice.

Hospital Notes.—St. Francis Hospital, Hartford, announces that its Easter donations amounted to $1,300.——The treasurer of the William W. Backus Hospital, Norwich, appeared before the house committee on appropriations with the unusual request that the institution be relieved from taking the $10,000 appropriated for its use.——St. Vincent's Hospital, Bridgeport, has had appropriated for its use $6,000 to be paid on completion of the equipment of the hospital, and after the institution has been in actual operation three months.——An appropriation of $10,000 has been granted the Wallingford Sanatorium for Tuberculosis.——The benefit performance for the Hartford Hospital, May 29, netted more than $5,500 for the institution.——Senator H. H. Peck, Charles F. Rockwell and Charles F. Linsley have each given $500 to the Meriden Hospital.

DISTRICT OF COLUMBIA.

Hospital in New Home.—The new building of the Casualty Hospital and Eastern Dispensary, Washington, was formally opened, April 26.——Dr. Charles F. Rand has given the hospital a medical library of 160 volumes, a surgical chair and electrical apparatus.

Eye and Ear Society Officers.—At the meeting of the Society of Ophthalmologists and Otologists of Washington, May 19, the following officers were elected: President, Dr. Oscar A. M. McKimmie; vice-president, Dr. Hobart S. Dye, and secretary *and treasurer*, Dr. Henry A. Polkihorn.

Medical Board Decision Reversed.—In the case of Dr. Sigmund A. Czarra, Washington, the District Court of Appeals has reversed the decision of the board of medical supervisors against the appellant, holding that Congress has the power to regulate the practice of medicine and surgery in the District of Columbia and to define what shall constitute unprofessional or dishonorable conduct, but that it has failed to do so.

Commencements.—George Washington University Department of Medicine, Washington, held its eighty-fourth annual commencement exercises, May 29. Prof. Charles E. Monroe, Ph.D., delivered the address on "The Lord Protector's Motto;" Dr. William F. R. Phillips, the dean of the faculty, presented the candidates for degrees which were conferred by the president of the university. A class of 61 was graduated.——Howard University Medical Department, Washington, held its annual commencement, June 1.

ILLINOIS.

Hospital Transferred.—The grounds and buildings of St. Francis' Hospital, Blue Island, have been transferred by Rev. Francis A. Rempe to the Sisters of St. Mary of St. Louis. The property is valued at $50,000.

Personal.—Dr. James A. Egan, Springfield, secretary of the State Board of Health, has been appointed a member of the committee to inspect state military schools.——Dr. Carleton E. Starrett, Elgin, has returned from Europe.——Dr. Frank B. Lucas, Peoria, has been made physician of the township board of health.——Dr. William Hul, Bloomington, is seriously ill.——Dr. James L. O'Connor, Arlington, who was operated on for appendicitis last week, is progressing favorably toward convalescence.

To Save the Babies.—The State Board of Health has issued a timely twelve-page circular on "Infant Feeding and the Care of the Mother and Infant," written not for the physician but for the guidance of mothers. It deals first with the dangers of artificial feeding and how these dangers may be minimized; urges the use of pure cow's milk, properly diluted and modified; gives sound advice on the care, exercise, diet and mode of life of the nursing mother, and pays especial attention to the care of the infant, the danger signals of the first year, and the necessity of cleanliness. This circular is intended for general distribution.

Chicago.

Fined for Contempt of Court.—Because Dr. George W. Boice, when subpœnaed as a witness before Judge Tuthill, gave freely to the deputy sheriff his opinion of courts, judges, sheriffs, etc., Judge Tuthill admonished him and then fined him $10 with added costs.

Fined for Improper Use of Mails.—Drs. Alice B. Stockham and Edward B. Beckwith on June 5 were found guilty of sending improper matter through the mails and were fined $250 each. In addition, Dr. Stockham was sentenced to pay one-third and Dr. Beckwith two-thirds of the court costs.

The Week's Deaths.—There were 514 deaths reported in the week ended *June 10, equivalent to an annual death rate* of 13.46 per 1,000. Pneumonia again takes the lead with 73 deaths, consumption coming next with 70. Among other principal death causes are the following: Heart diseases and violence, each 48, and nephritis, 46.

Erratic Weather Causes Increased Mortality.—A sunstroke in April and overcoats, wool blankets and another sunstroke in June are the sufficient explanation of the increase of mortality in one of the two most healthful months in the year. The 47 more deaths than in the previous week and the 94 more than in the corresponding week of 1904 represent increases of 10.4 and 18.4 per cent. respectively in the annual death rates per 1,000 of the population. The erratic weather is chiefly responsible for the 23 more deaths from consumption and the 24 more from pneumonia than reported during the week of June 3.

University of Chicago Faculty Notice.—It is officially announced that Dr. Nicholas Senn has been elected professor of surgery, and Dr. Frank Billings, professor of medicine in the University of Chicago, and will lecture before the respective classes at the university. Dr. Senn will have entire charge of the clinical teaching of surgery during the fall semester. Dr. John B. Murphy has been elected professor of surgery in Rush Medical College, and, with Dr. Arthur Dean Bevan, will have charge of the administrative details of the department of surgery and will conduct the clinical teaching of surgery during the remainder of the year.

INDIANA.

Going Abroad.—Dr. James E. Johnson, Marion, left for Europe June 3.——Dr. David R. Ulmer, Alexandria, has gone to Europe.

Judgment for Physician.—On June 3 a jury in the Circuit Court, at New Castle, awarded Dr. John P. Black, Greenfield, a judgment against that city of $850, for services rendered during the recent smallpox epidemic.

Health Conference.—Under the auspices of the State Board of Health, the annual conference of health officers was held at Indianapolis, June 1, 2 and 3. Drs. Joseph McFarland and Seneca Egbert of Philadelphia delivered addresses.

Injured and Operated On.—Dr. Arthur K. Hammond, in jumping from his carriage when his horse fell, was kicked on the wrist by his horse, fracturing the arm at that point.——Dr. James N. McCoy, Vincennes, was operated on for appendicitis at St. Vincent's Hospital, Indianapolis, June 9.

Personal.—Dr. John L. Puckett, Kokomo, has been made secretary of the local board of health and charities.——Dr. Samuel Harrell has been elected president, and Dr. Fred A. Tucker, secretary of the Noblesville Board of Health.——Dr. Edward P. Busse, Vincennes, has been made a member of the board of park commissioners.——Dr. T. Victor Keene, Indianapolis, has been elected superintendent and pathologist of the new State Laboratory of Hygiene, with a salary of $2,000 a year

KENTUCKY.

Will Equip Wards.—Joseph L. Friedman and John W. Keiler will each equip a ward in the Riverside Hospital, Paducah, in memory of his father.

Physician's Suit Compromised.—The suit of Dr. Theodore D. Finck, Louisville against the estate of the late Carl F. Eller, asking $7,858 for treatment of the deceased for 7 years, has been settled by mutual agreement for $1,500.

Physicians Nominated.—Dr. Lawrence C. Nell, Columbia, has been nominated for state senator from the Sixteenth senatorial district.——Dr. John A. Yates, Edmonton, has been nominated for the legislature, by the republicans of Metcalf and Monroe counties.

Must Comply with Health Regulations.—On May 24 the State Board of Health granted an extension of ten days to the authorities of Mahlenberg county, to take the proper steps to control the spread of smallpox in that county. In the event of non-compliance with the regulations, quarantine of the entire county will be declared and rigidly enforced.

Personal.—Dr. Charles C. Norman, Hawesville, is seriously ill with cirrhosis of the liver.——Dr. William A. Briggs, Bowling Green, was assaulted with brass knuckles by a negro ex-convict, breaking his nose, and sustaining severe cuts and bruises.——Dr. and Mrs. Morean S. Brown, Winchester, have started on a trip to Alaska and Hawaii.——Dr. Louis H. Landman, Covington, will go to Europe for a year, sailing in July.

Anti-Tuberculosis League Organized.—The Kentucky Anti-Tuberculosis League was formally organized on June 8, by the election of the following officers: President, W. C. Nones; vice-president, Rev. William H. Ramsey; secretary, George L. Sehon, and treasurer, Theodore Harris. A committee composed of Dr. Jacob A. Flexner, Robert W. Bingham and C. A. Adler was appointed to draft by-laws. A resolution was adopted asking every person interested in the establishment of a tuberculosis hospital to join the association, which can be done by the payment of $5. Thus far no site has been considered nor will this be done until the membership is increased.

MARYLAND.

Fire in Towson.—The house occupied by Dr. Stuart W. Cassard in Towson, was burned May 30. Insurance covered $2,500 of the loss.

Osler Memorial Number.—The issue of the *Maryland Medical Journal* for June was an Osler memorial number. It contained articles on Dr. Osler as teacher and physician and illustrations of Johns Hopkins and Oxford universities, of Dr. Osler at different ages, his residence, etc.

Protest Against Tuberculosis Hospital.—The movement by ex-Surgeon General George M. Sternberg, U. S. Army, and others to establish a sanitarium for tuberculosis at Rockville, Montgomery County, has been prohibited by the mayor and council of that town, as the citizens and physicians protested against it.

Baltimore.

Johns Hopkins Commencement.—At the annual commencement exercises of the Medical Department of Johns Hopkins University, June 13, a class of 53 received degrees.

Personal.—Dr. William Lee Howard sailed for Europe June 3.——Dr. Albert M. Wortman has been elected a member of the National Geographical Society of Washington, D. C.

Appropriate Money for Isolation Hospital.—The Board of Estimates has approved the ordinance appropriating $25,000 out of the 1906 levy for the erection of an infectious diseases hospital.

Fellows of Johns Hopkins.—The following have been given university fellowships at the Johns Hopkins University: Ernest K. Cullen, M.B., University of Toronto 1903, pathology, and John A. E. Eyster, M.D., Johns Hopkins 1905, physiology.

Hospital Reports.—The thirteenth annual report of the Evening Dispensary for working women and girls shows 1,302 new patients for the year; 369 visits to Wednesday clinics; 4,960 patients in all clinics; 2,260 visits paid to homes; 12,791 prescriptions filled; 8 major surgical operations.——Limited provision is made for surgical cases at the Church Home and Infirmary. The income of the home was $1,903; the disbursements, $1,710.

NEW JERSEY.

Opening of Sanitarium.—The twenty-fifth annual opening of the sanitarium at Red Bank, for poor children, took place June 10.

Hospital Opened.—St. Elizabeth's Hospital, Elizabeth, which was dedicated May 29, was formally opened to receive patients the following day. The institution is non-sectarian and is intended primarily for women.

Bogus Physician Goes to Prison.—Maximilian Muller, who stole jewelry worth $330 from a citizen of Newark by pretending to be a physician and taking his victim under treatment, pleaded guilty to larceny June 5, and was sentenced to imprisonment for five years.

Hospital Report.—The report of Cooper Hospital, Camden, for May shows that 1,814 patients were cared for, or an average of 59 daily; 8 patients were admitted to the wards of the hospital; 411 new cases were treated in the dispensary, and 1,291 return visits were made.

Funds for Hospitals.—At the meeting May 21, $4,236 was subscribed to the building fund of the Beth Israel Hospital, Newark.——The Board of Freeholders has appropriated $5,000 to the Perth Amboy Hospital, and the same amount to the Wells Memorial Hospital, New Brunswick.——The annual fair for the benefit of the Memorial Hospital netted nearly $10,000 for the beneficiary.

Hospital Appointees.—Atlantic City Hospital, Dr. Samuel Barbosh; Trenton Emergency Hospital, Dr. Howard W. Levengood; Trenton State Hospital, Dr. Clarence J. Slack.——Drs. Fred Sonneborn, Philadelphia; John Glick, Wilkesbarre, and Edgar L. West, Hamilton Square, have been elected resident physicians at St. Francis' Hospital, Trenton.——Dr. Victor Mravlag has been appointed consulting surgeon, and Dr. Thomas E. Dolan, visiting surgeon, at Alexian Brothers' Hospital, Elizabeth.

NEW YORK.

Addition to Batavia Hospital.—An addition is to be built for the hospital at Batavia. This is made possible by the will of the late Adelaide R. Kenney, which leaves $20,000 to the institution.

Staten Island Mosquitoes.—The war of extermination has begun. Dr. Aloin H. Doty, of the government sanitary department, and Chief Engineer Skinner, started work June 7. Special officers detailed by the sanitary department assisted.

Prisons to Be Made Sanitary.—The joint committees from the Society of Medical Jurisprudence and the Civic Club met recently to perfect plans for conducting an extended investigation of the police stations, courts and court prisons of Manhattan and the Bronx. At the end of the summer after these have been investigated, all found insanitary will be reported to the Health Board and that body will be asked to direct that they be closed

Hospital Managers Named.—Gov. Higgins decided on the appointments of managers of the state hospitals for the insane which under the Allis law, takes the place of the board of visitation to these institutions. This restoration of the boards of managers marks the culmination of a fight of the charitable interests of the state against the legislation of 1902, which put them out of office and centralized all power over the insane hospitals in the State Lunacy Commission.

New York City.

To Endow a Free Bed.—The will of Mrs. Rebecca Ladew bequeaths $5,000 for the purpose of endowing a free bed in a hospital to be designated by her executors.

Yellow Fever Death.—Frank O'Leary, a passenger on the *Seguranca* from Colon, who has removed to Swinburne Island, on the arrival of the ship in New York, died from yellow fever, June 9.

Record Low Death Rate.—The death rate for the week ended June 2 was equivalent to annual mortality of 16.11 per thousand, which is a new death record for this season of the year. The record for a number of years has been 16.74.

St. Gregory's Free Hospital.—The first hospital in this city for purely the care of accident cases was opened last week. Two ambulances are attached to the hospital and it is intended to aid the Hudson Street Hospital in accident cases as much as possible.

A Medical Quack Heavily Fined.—Through the efforts of the County Medical Society Joseph Rohrer was sentenced to pay a fine of $500, the heaviest imposed for a misdemeanor in the Court of Special Sessions. He was convicted for practicing medicine without a license, and this was his third conviction.

Contagious Diseases.—There were reported to the sanitary bureau for the week ended June 3, 727 cases of measles with 17 deaths; 393 cases of tuberculosis with 142 deaths; 320 cases of diphtheria with 27 deaths; 152 cases of scarlet fever with 14 deaths; 71 cases of cerebrospinal meningitis with 60 deaths; 38 cases of typhoid fever with 4 deaths; 113 cases of varicella and 1 case of smallpox. The epidemic of cerebrospinal meningitis seems to be decreasing.

A New Law Needed.—Health Commissioner Darlington was treated so insultingly when he appeared before the town of Bloomingburgh, Sullivan County, to ask for permission to establish a sanitarium for New York City's consumptives that he has determined not to appear before a town board but instead to prove unconstitutional the law which requires that New York City can not establish a sanitarium without obtaining the consent of the town board and the Board of County Supervisors.

Personal.—Dr. Frederic Griffith has been appointed by the Pennsylvania State Society a member of the International Peace Congress to be held in Lucerne, Switzerland, during the coming summer.——E. J. Lederle, formerly Commissioner of Health, has been appointed a member of the State Water Commission.——Dr. Valentine Mott and wife sailed on the *Barbarossa* June 8.——Dr. Francis J. Quinlan has been elected President of the Catholic Club.——Dr. William S. Stone, who was operated on for appendicitis last week, is convalescing rapidly.

Lebanon Hospital.—The annual report of this institution shows that the work has grown to such an extent that a new site has been required for the erection of a training school for nurses so that the quarters at present occupied may be used as wards. The money for this purpose thus far donated amounts to $30,000. During the past year 2,721 patients were treated. The dispensary treated 19,009 cases, and the ambulance responded to 1,401 calls. The receipts during the year amounted to $97.521 and the disbursements to $96,219. The legacies received amounted to about $2,000.

Subway Air Again.—The few warm days that we have had this spring have led to renewed agitation in regard to the subway. In warm weather the surface air is warmer than the air underground and in consequence of the density due to lower temperature and the admixture of carbonic-acid gas the air is retained under ground and while passing cars may churn up the air there is not that exchange between the surface and subway air which is requisite for proper ventilation. It is probable that it will be necessary to introduce rotary fans. Health Commissioner Darlington has drawn up rules to be applied to the cleaning of the stations and wall of the subway, most of which has already been put into service.

The Milk Supply.—Judge Lacombe has signed an order suspending the operations of an injunction recently granted in the Federal courts in favor of the Ironclad Manufacturing Company. The order prevented the use of a patented milk can owned by the company and it was claimed that there were as many as 200,000 cans in use in this city which were infringements on the patent. Certain milk dealers said that the Ironclad Company threatened to seize their cans and empty the milk and retain possession of the cans.——The Association for the Improvement of the Milk Supply of New York held its first executive meeting June 8. This association will work with the Board of Health. The officers will have sanitary supervision over the men who deliver milk in the city and over all dairies, creameries and shipping stations. Firms interested in industries allied to the milk supply will be admitted to the association.

Tuberculosis Among Negroes.—A special class for the treatment of pulmonary tuberculosis among negroes has been started at the Department of Health's clinic for the treatment of communicable pulmonary diseases. This class will be held on the evenings of Tuesday, Thursday and Saturday of each week from 8 to 9 p. m., and only negroes will be seen on those days and hours. The establishment of such a class was due to a request made by the Afro-American physicians of the city, who believed that the colored people would attend such a special class more readily. The physicians in attendance are negroes, and arrangements have been made for the services of a colored nurse. The physicians on duty are: Dr. Peter A. Johnson, laryngologist; and Drs. William H. Johnson, Alexander A. Kellogg, Albert S. Reed, J. F. Thorpe, and E. P. Roberts, attending physicians. These physicians were recommended by the Medico Chirurgical Society, New York City, at a special meeting June 4. Treatment and medicines are, of course, free; and the patients will be visited at their homes by the tuberculosis nurses of the department. Negroes may attend any of the other classes of the clinic, which is open daily from 9 to 4, and on Monday, Wednesday and Friday evenings from 8 to 9 p. m.

Defective Pupils in Schools.—It has been announced by the Medical Inspector in the division of contagious diseases of the Health Department that of 7,166 boys whom he had examined, he had found 3,132 in need of medical attention. The following table shows the result of the work:

Total examination of boys	7,166
Cases of bad nutrition	632
Cases of enlarged anterior glands	1,221
Cases of enlarged posterior glands	417
Cases of chorea (St. Vitus's dance)	85
Cases of cardiac disease	133
Cases of pulmonary disease	127
Cases of skin disease	126
Cases of deformity of spine	68
Cases of deformity of chest	100
Cases of deformity of extremities	133
Cases of defective vision (objective)	1,273
Cases of defective vision (subjective)	517
Cases of defective hearing	265
Cases of defective nasal breathing	843
Cases of defective teeth	1,946
Cases of hypertrophied tonsils	602
Cases of posterior nasal growths	704
Cases of bad mentality	650
Requiring medical attention	3,132

The results of inquiry into the 650 cases of weak mentality gave the following results:

Total mental cases investigated	515
Cases of bad nutrition	113
Cases of anterior glands	132
Cases of posterior glands	23
Cases of chorea	13
Cases of cardiac disease	20
Cases cf pulmonary disease	0
Cases of skin disease	11
Cases of deformity of chest, spine and extremities	28
Cases of defective vision	229

Pharmacology

FURTHER COMMENTS QUOTED.

We submit below some expressions of opinion from various publications which discuss the general subject of secret nostrums and the plan of the Council on Pharmacy and Chemistry:

NORTHWEST MEDICINE (April): "These uncertainties are now to be dissolved by action of the Council on Pharmacy and Chemistry of the American Medical Association, whose personnel includes chemists and pharmacists of national note. . . . The profession will await the appearance of this publication with much interest. The mooted question of ethical and unethical preparations should then be relegated to the past. For whatever passes muster at the hands of the men composing this council should be worthy of unquestioned acceptance."

THE COLUMBUS MEDICAL JOURNAL (April, 1905): "We note with pleasure that the Board of Trustees of the American Medical Association has created an advisory board to be known as the Council on Pharmacy and Chemistry of the American Medical Association. . . . The work of this council will be of great advantage to physicians and to editors of other journals, for, as stated by the council, the physician not only has the right to know, but it is his duty to know, the composition of medicines he prescribes for his patients."

THE MEDICAL RECORDER, April, after calling attention to an abuse which it declares "is constantly on the increase, namely, the prescribing of secret or semi-secret proprietary medicines by reputable physicians," remarks: "If this abuse continues the art of prescription writing and also the art of prescription compounding will soon be lost arts. This is not, however, a local condition; it exists all over the country. The Council on Pharmacy and Chemistry will pass on the value of proprietary medicine from a pharmaceutical and ethical point of view. After that, if the evil continues, the profession will have themselves alone to blame."

"The Best Artificial Food."

We have recently had occasion to open a package of a well-known "Tasteless Cod Liver Oil" preparation. The circular which was wrapped about the bottle was replete with interesting information, especially for the patient who obtains the remedy in the original package, as prescribed by his physician. He finds in it a list of the diseases in which the preparation does wonders—they range from the dread consumption to cystitis and hemorrhage of the kidney. Most interesting to us, however, is the statement that this compound "contains all the necessary elements of nutrition." It is too bad to disturb this beautiful vision by the report of the chemist. This shows that the product is quite free from oil or proteids; the only nutrient ingredients are alcohol, sugar and, perhaps, glycerin! But the claims of the manufacturer are probably quite correct, for it contains carbon, hydrogen, oxygen, and probably a trace of nitrogen—so does gunpowder! Perhaps it will now be the turn of strychnin to be advertised as the ideal food! It seems superfluous to point out the moral of this tale.

Correspondence

Pennsylvania and North Carolina State Board Examinations in 1904.

WAYNESVILLE, N. C., June 2, 1905.

To the Editor:—In THE JOURNAL, May 6, is published a very elaborate series of tables exhibiting in detail the results of the examinations held in the year 1904 in the various states for state license to practice medicine. These tables are very instructive, comprehensive and complete, and replete with much valuable information relative to the standards of medical education in the 63 medical colleges of the country whose graduates appeared before the various examining boards of the states.

In 1904 there were examined for license in the separate states of the Union 8,034 graduated physicians, of which vast number 5,672 were granted license and 1,365 rejected—the gross percentage of failures being 19.3.

Some of these were duplicates, of which the carefully prepared tables make no mention. I know that of recent years it has become more or less a custom for young physicians just graduated to "swing around the circle," as it were, of a number of state medical boards and to secure license from a few or several pending the important question of location. This injects a possible source of error into the valuable data which future tabulators for THE JOURNAL will likely find some way to avoid. Suffice it to say here that in the main the work has been splendidly performed and has brought together a mass of information relative to the various medical teaching institutions of our country which is nowhere else to be found, and which in its conception reflects credit on the editor of THE JOURNAL.

But, to consider more critically the results manifest in the tables, we find a not inconsiderable portion of these graduates were from the schools prior to 1904, the 1904 graduates making a decidedly better showing before the boards. Of the 8,034 graduated applicants in 1904, 4,542 of the number were graduates of the colleges in 1904, and from this number 3,533 were granted license and 449 rejected, the percentage of rejections being for the graduates of 1904 only 11.3.

THE JOURNAL presents a smaller table, showing in detail the rejection of graduates by all state boards from the graduates of the separate states of the Union, and in this interesting tabulation it falls to the unenviable portion of North Carolina medical colleges to present the greatest percentage of failures, to-wit, in the "graduates of all years" North Carolina leads in percentage of failures with a record of 39.6 per cent., and in "graduates of 1904" it is somewhat lower, being 34.1 per cent., though still at the top of the list for failures.

But a little investigation shows that the high percentage of the failures of North Carolina graduates in medicine is due to the record of the graduates of the negro medical college at Raleigh, the Medical Department of Shaw University or Leonard Medical College, as it is usually called.

A glance at the figures below is interesting:

	Passed.	Failed.	Rejected, per cent.	Reg. on Dipl.	Totals.
Physicians examined by all state medical licensing boards in 1904........	5,672	1,363	19.3	999	8,034
N. C. MEDICAL COLLEGES:					
University of N. C.........	4	0	.0	0	4
N. C. Med. College........	19	1	.5	0	20
Leonard Medical College....	12	22	64.7	0	34
Physicians examined by all state examining boards in 1904, graduates of the year 1904—graduates of 163 schools	3,643	449	11.3	560	4,542
N. C. MEDICAL COLLEGES:					
University of N. C........	4	0	.0	0	4
N. C. Medical College......	17	0	.0	0	17
Leonard Medical College....	8	15	65.2	0	23

While an occasional negro is found in the medical classes at Harvard and other of the eastern schools of medicine, it is a fact that the great majority of negroes who study medicine do so at the schools in Raleigh, N. C., Nashville, Tenn., and Washington, D. C., and it would only have been eminently fair and proper if THE JOURNAL had taken cognizance of the presence of a considerable percentage of negro graduates in the colleges of certain states before it published gross results which, on the surface, appear to the discredit of the medical colleges therein located.

A cursory survey of the figures in the above table reveals the fact that the correct percentage of failures of graduates from North Carolina schools of medicine graduating in the various years prior to 1904, as evidenced in the examinations by the various state boards of the country for the examinations held in 1904, was for white men only 5 per cent. Of white graduates of the classes of 1904 the percentage of failures was 0. A very striking contrast to the figures which THE JOURNAL publishes as evidencing the standard of medical education in North Carolina and which figures place her at the bottom of the list of all the states of the Union, when the facts are that, when the records of her white graduates are studied, she should come at the top, being better than that of any southern state and equaled by few in any section. Taken—13 states—at random over the country, we note for comparison the percentage of failures of all graduates without regard to year of graduation before the boards in 1904 was as follows:

Alabama, 11.1; Georgia, 8.8; South Carolina, 7.7; Texas, 14.3; Virginia, 8.5; Massachusetts, 7.5; Wisconsin, 33.3; Michigan, 12.5; Louisiana, 15.9; Illinois, 8.2; New York, 5.3; Maryland, 28.7; Ohio, 19.3; North Carolina (white physicians), 5.

Again, take the record of the examination of graduates of all colleges in 1904 before all state boards in 1904 and examine the individual states:

Alabama, 3.1; Georgia, 1.4; South Carolina, 4.8; Texas, 16; Virginia, 6.2; Massachusetts, 6.7; Wisconsin, 37.5; Michigan, 3.0; Louisiana, 6.7; Illinois, 4.9; New York, 2.5; Maryland, 27.8; Ohio, 9.0; North Carolina (white physicians), 0.

Certainly in a matter which so concerns the reputation of the North Carolina colleges of medicine, it is only just that a loyal citizen of the state should direct attention to the incorrect rendering of the data relative to the standard of the schools. While I have never been connected in any capacity with the teaching of medicine in any of the North Carolina colleges of medicine, for several years I was a member of the North Carolina State Board of Medical Examiners, and an experience with some hundreds of medical graduates fully satisfied me that the work done in the schools of medicine of North Carolina for white men would compare very favorably with that done by white men anywhere.

In this connection it may be well to note also that in the negro medical college of this state, for about twenty years, a corps of able, earnest, faithful white men, the elite of the profession, socially, intellectually and otherwise, have labored zealously for the uplifting of the negro race by endeavoring to teach them medicine, but up to the present time (as, for instance, the examining board records above noted) with only indifferent success. God in his infinite wisdom evidently knew what he was about when he prepared and fitted certain races and types of beings for "hewers of wood" and "drawers of water," and even though we may with valiant effort attempt to change the inevitable bent of a race, the result is very apt to be only what a student of the negro from a scientific standpoint would expect. He is not possessed of those mental faculties which enable him to grapple with the abstrusities of medical science. By rote he may learn certain things (though his capacity even for doing this will be in direct proportion to the amount of white blood in his veins—how very, very rarely do we in the South who know the race as it is ever see much real intellectual development save where there is much mingling of Caucasian blood in the stream), but he can never be a man of science. In North Carolina, in addition to the earnest effort of white physicians, who have for two-score years labored without money compensation for the betterment of the race, there is everywhere a distinct recognition of the demand of the white physicians for negro physicians, and the white physicians are throughout the state encouraging negro physicians in every possible way. We consult with them freely, we aid them in every possible way, we look on them as the flower of their race—and they certainly are the decidedly superior men of their race in the South—they have absolutely the same examinations before our state examining board as the white physicians; there is no possible opportunity nor desire for discrimination, but all the same the results do not place the negro in a favorable light as a student of medicine.

In conclusion, if it is not asking too much, I respectfully suggest that in future compilations of this sort The Journal will please do just as the Federal Government does in compilations of such character—place the races in separate lists and not belittle the record of a proud and worthy people by comparisons which include the mingling of inferior creations.

J. Howell Way, M.D.,

Secretary Medical Society of the State of North Carolina, member North Carolina State Board of Health, ex-member and Secretary North Carolina State Board of Medical Examiners.

[Editor's Note.—The *total* percentage of failures in the State of North Carolina would be the same, even though it were shown *what portion* were of the white and what portion of the colored race. The Journal has certainly laid the blame at the right door when it needs but a glance at the tables to show what college or colleges are to blame for the high percentage of failures.]

Philadelphia, June 6, 1905.

To the Editor:—The results of the examinations for medical licenses for 1904, as published in The Journal, May 3, have been very interesting to me, and I feel that I must commend you, both for their completeness and for the energy and labor expended in their preparation.

There is, however, one point for criticism concerning them, inasmuch as it introduces an element of unfairness in the published reports and records of certain schools. I refer to the fact that in the report for Pennsylvania schools, and perhaps for those of some other states, certain individuals were counted twice in the summations, this being contrary, I believe, to established principles of statistical determination. Thus, for the Medico-Chirurgical College of Philadelphia, 78 members of the class of 1904 are reported as being examined, with 13 failures, the latter giving a percentage of 16.7. The fact is, no one knows just how many individuals of this class were examined last year, as some were possibly examined in more than one state; but certainly not more than 56 were examined in Pennsylvania, and these, added to the 15 that you report as examined in other states, make a total of only 71, of whom none in the other states and only 6 in Pennsylvania had failed to pass at the end of the year. Thus the actual percentage of failures for this school for the class of 1904 is 8.45, or just about half of that reported. Likewise, of the graduates from 1900 to 1904, inclusive, there were but 88 examined instead of 98, and of these only 11 instead of 21 failed to pass by the end of the year, this justifying a reduction of almost one-half in the published percentage of failures. And so, for the total for all years the percentage is reduced from 20.8 to 11.95.

I have no doubt that the error is to be attributed to the source of your information concerning the Pennsylvania applicants rather than to your office, but I trust that you will appreciate the element of unfairness involved, and that in your future reports you will enumerate—as I believe you did in those for 1903—the actual number of *individuals* that have succeeded or failed at the *ends* of the respective years.

I would also ask you to note that, unless the emendation indicated be made for some of the other schools in this state, as well as for this college, Pennsylvania is a marked exception to what you state to be the apparent rule, namely, "that the graduates of a certain school should have a much better chance of passing the examination in the state in which the school is located than they have elsewhere." Thus, according to Table G, there were for the Pennsylvania schools collectively 29 reported failures to 299 successes outside the state. Does not this clearly indicate either that the reports for Pennsylvania need the correction that I have asked for, or that the examinations in this state are far more drastic to the graduates of its schools than are those of other states?

Seneca Egbert,

Dean of the Department of Medicine, Medico-Chirurgical College.

[Editor's Note.—There are two possible ways wherein duplication may have occurred. 1. An applicant who failed at one examination may have come up for re-examination later in the year and may have been reported as another individual. 2. A graduate may have taken examinations in more than one state. In neither of these instances, however, would this reflect unfavorably against the college concerned unless the applicant failed in more than one attempt, as otherwise his success at a second examination would tend rather to cancel his failure at the first trial. An individual succeeding before several state boards would reflect with sufficient favor on the college giving him his training to warrant its being counted as separate individuals. The same argument would fit repeated failure with, of course, the opposite interpretation. It should certainly stand to the credit of the Pennsylvania State Examining Board if it requires the same high standard for the colleges of its own as for colleges of other states.]

Was the Schoolmaster Abroad?

———— ——, June 9, 1905.

To the Editor:—I submit for the information of your readers the questions in a state board examination and the answers submitted by a recent graduate of a well-known medical college in the West. The college is a member of the Association of American Medical Colleges and, in common with all other medical institutions recognized by the board giving the examination, is supposed to require evidence of high school education as a condition of admission. I wonder, and your readers will doubtless wonder, how any college could have graduated a student who would be responsible for such answers as these:

Question.—Give physical signs and symptoms of cerebrospinal meningitis.

Answer.—Cerebro spinal meningitis is is Inflammation of the spinal column or spinal cord and of the Cerebelliam of the brain it is also Pain in the back and back of the head there is heat and inflammation.

Question.—Give physical signs and symptoms of tuberculosis of the lungs.

Answer.—Tuberculosis of lungs is pain in the brest a dry and Hacking caugh and may spit up some and they may no.

Question.—Give physical signs and symptoms of lobar pneumonia.

Answer.—In Lobar Pneumonia we have a pain in the side bad breath rattling of the lungs coated Tongue and some fever colared stools red splotches on back.

Question.—Give physical signs and symptoms of chronic Bright's disease.

Answer.—Chronic Bright's disease is Inflammation of the kidney's scanty High Colored urine Pain in the back and scarcely fells like mooving has Pain in back and lions specific Gravity 1018 to 1030.

Question.—Give differential diagnosis between malaria and pyemia or concealed suppurations.

Answer.—Malaria the patient is full of bile has a chill ever few days. has a yellow color and jest drags around all the time and so weak that he cant do nothing. Pyemia is also torn down tissues but does not have the chills like they do in Malaria.

Question.—What are the symptoms of acute catarrh of the middle ear and what is the treatment?

Answer.—The symptoms of acute Catarrh of the middle year is a running of the ear and may cause deafness. Treatment is to wash the year out twice a day with warm watter and Green soap wash the year with a ear surrenge and then dry the ear as well as possible.

Question.—Give symptoms and treatment of scarlatina. Name some of the most frequent complications.

Answer.—Scarlatina is a severe disease among Children they have high fever Paining almost all over and it is an infectious disease it is dangerous among children. Treatment is to give anti Pyrene and small doses of Calomel they are most Frequent found in large towns or cities.

Question.—Name three respiratory stimulants, and mention the diseases in which you would use them.

Answer.—We have the wine. milk and Soups, I would use them in Lagripp & Pneumonia.

Question.—Explain the physiologic action and therapeutic indications of nux vomica. What are the active principles?

Answer.—The Physiological action and Therapeutic indications of Nux Vomica is to excite the vagi nerves and make a person sick at his Stomach so as to vomit him.

Question.—What are hypnotics? Name three and give action of one.

Answer.—Hypnotics are where a person has lost controle of hisself it might be that he is Intoxicated or Insane, or overdose of Opium Intoxication is where Liquor has him bested and cannot do anything he looses controle of muscles and nerves.

Question.—Classify hyocin hydrobromate and give the dose.

Answer.—Hyocin hydrobromate is a nerve sedative it eases and rests your patient the dose is one half teaspoonfull.

Question.—Name the drugs which lower blood pressure and give indications for use.

Answer.—Anti Pyerine give it when the pulse is high.

Question.—What are the principal forms of bacteria and how do they differ in appearance?

Answer.—Bacteria differs in several ways its principle form if from an old Sore some in cuts bruises burns the Bacterea may live for several days it is hard to kill they may be in Maleria Typhoid Pneumonia Fevers Dyptheria.

Question.—Give Koch's postulates or rules in regard to bacterial cause of disease.

Answer.—well the bacteria gets into the system and sets up an critation and they jest keep accumilateing and become more and more all the time if the Patient is old they are harder to destroy if the patient old wore out and broke down when they once get hold they accumilate very readily they will live several days in the Sun they are the cause of many diseases.

Question.—How would you differentiate dysentery from typhoid fever by bacteriologic test?

Answer.—I would differentiate dysentery and Typhoid fever by the Tongue being coated and the symptoms what ever that they might be if by the Bacteriological Test if I should find the Typhoid Bacill I would diagnose the case as Typhoid fever other wise I dont no jest how that I diagnose the case also by the stools.

Question.—Differentiate between pathogenic and nonpathogenic bacteria and give five examples of each.

Answer.—Pathogenic Bacteria always occurs occur in man it may be a cut broose Syphilitic Gangrene or Ghonorhea Non Pathogenic Bacteria is found in horses animals Guinea Pigs Rabbits and they may get the bacteria from some Stream of watter or from something that they have eaten a person could ketch it the same way or they could ketch it from sleeping with each other or being with each other from kissing and so forth.

Anticipating inquiries I will say that at the time the candidate tock the examination he was apparently clothed and in his right mind.

An Examiner.

The Physiologic Action and Toxic Action of Acetanilid.

Philadelphia, June 7, 1905.

To the Editor:—In The Journal, June 3, page 1790, appears the "Official Report on Acetanilid Mixtures" made by the Committee on Chemistry of the Council on Pharmacy and Chemistry of the American Medical Association. The report is signed by the individual members of the committee, who possess our full confidence, and who are recognized by all as fully competent to speak with authority on any subject connected with materia medica or medical chemistry. My object in writing at the present time is to call attention pointedly to this valuable report, and to express my great personal satisfaction and gratification, as a teacher of pharmacology, with the important work which the Council has inaugurated. I believe that the value of this work to American medicine can scarcely be overestimated. The Section on Pharmacology and Materia Medica has on several occasions, by resolution, called the attention of the Association to the crying need of enlightenment of the medical profession on the subject of the exact composition of proprietary remedies of secret composition, which have been so lavishly exploited and freely advertised in our medical journals. The fact that this work has at length been definitely undertaken is hailed with delight by every member of the Section of which I have the honor to be an ex-chairman; and probably also by every American physician who is interested in the scientific practice of medicine. It is acknowledged by all that the habit of prescribing pharmaceuticals of unknown composition is utterly unscientific and stultifying, and is opposed to all further progress in therapeutics. The new departure of The Journal in giving publicity to the results of examinations of secret proprietary preparations, thoughtlessly used by some physicians, is the first practical step toward the removal of this reproach.

which has assumed the proportion of a scandal, to American medicine.

In the carefully prepared article which appears as a supplement to the above mentioned report, entitled "Coal-Tar Products, Especially Acetanilid," you have done well in calling attention to the dangers following the incautious use of acetanilid. You have done me the honor of referring to me as opposing the theory that the antipyretic influence is to be explained by the primary action of acetanilid on the corpus striatum, and as teaching the generally adopted view that its action is chiefly on the blood and circulation. In view of the importance of the subject, I feel that I am not trespassing too much on your space in asking permission to make my position a little more clear on the physiologic and toxic action of acetanilid.

The first point that attracts attention, from the clinical standpoint, is the marked discrepancy that is seen to exist among writers in regard to the size of the dose. The British Pharmacopeia states that the ordinary average dose for an adult is from one to three grains; Sydney Ringer makes it four or five grains; the United States Dispensatory, from five to fifteen grains. In Germany several grams have been given at a dose; doses of four grams have been followed by serious collapse and recovery. On the other hand, patients have been made cyanotic and have collapsed with two or three grains, and death has more than once been reported from five grains. Numerous deaths from headache powders also have been reported; the principal constituent of these powders, as we know, is acetanilid. Recovery has taken place after the ingestion of nearly an ounce (31.1 gr.).

While idiosyncrasy or unusual susceptibility may, to some degree, enter into the explanation, yet it seems inadequate to solve all cases. I would suggest that impurity of the acetanilid may be responsible for some accidents. Anilin is very poisonous and the presence of anilin compounds, due to imperfect purification, might produce symptoms of collapse from small doses. As stated in my work on "Materia Medica and Therapeutics" (Fifth Edition, page 10), "Toxic symptoms are especially apt to occur when acettoluid is present." In this connection, we may recall the fact that Ritsert (*Pharm-Zeitung*, 1890, p. 306) has called attention to the almost constant presence of toluidin in commercial anilin. (Quoted from United States Dispensatory, 18th Edition.) To return, however, to the subject of acetanilid itself, and to its proper physiologic action: As pointed out by T. Lauder Brunton, in his Croonian lectures on the "Relationship Between Chemical Structure and Physiologic Action" of drugs (1892), acetanilid has the simplest structure of any member of the group of aromatic bodies, and is the nearest to anilin, since it merely consists of anilin in which one atom of hydrogen is replaced by acetyl. It may also be regarded as ammonia in which one atom of hydrogen is replaced by phenyl and another by acetyl, hence it is also known as phenylacetamide. Structurally, therefore, acetanilid is closely related to phenacetin; but it is less soluble in water, and is more toxic than the latter. In its medical actions, it appears to be almost identical with antipyrin; but the latter does not cause alteration in the red blood cells, with the formation of methemaglobin, as acetanilid and its congeners do. This action is due to the decomposition of acetanilid in the blood and the liberation of paramidophenol, or a similar derivative. This action also occurs, although more slowly, in the case of phenacetin and its allies, and is absent after antipyrin (as stated by Cushny). The toxic action of comparatively small doses of acetanilid is thus explained. Small quantities cause the formation of methemaglobin within the blood cells, which remain intact; but larger doses destroy the blood cells and set free the methemaglobin in the plasma. Part of this, in escaping through the kidneys, may excite nephritis; and set up albuminuria, hemaglobinuria, or hematuria.

Without pursuing this interesting topic further, I would merely express my cordial agreement with the views expressed in the article referred to, especially the following paragraphs:

"That the action of acetanilid is more pronounced on the blood than on any other part of the system is generally recognized. Consequently, its effects on the circulation, respiration, temperature, and elimination are all probably secondary to the blood changes, etc."

In conclusion, I wish to emphasize your final word of warning as to the cautious use of the drug, especially when the personal idiosyncrasy, or degree of susceptibility, to the toxic action of acetanilid is unknown. Compounds, or mixtures, of acetanilid with soda, ammonia, or other comparatively harmless substances, should not be administered in large doses indiscriminately, simply because they are advertised as being "entirely free from depressing action on the heart and circulation." John V. Shoemaker.

1519 Walnut Street.

Too Few Physicians—Hardly.

To the Editor.—An article has been going the rounds of the daily press, purporting to be an interview with me, bewailing the prospective scarcity of physicians. No such interview was ever held. The only grounds that could ever have existed for such an article was that while I was talking to another physician, I congratulated the people that good, yes, first-class medical schools would have fewer graduates owing to the fact that preliminary requirements and the standard of teaching had increased to such an extent that numbers would not rush to these colleges as had been the case before the rise in requirements. It is quality and not quantity that is needed. I have stood for quality all my life. I endorse the sentiment in your editorial.[1] "Too few physicians? Hardly."

Yours truly,
A. W. McAlester.

"Epilepsy of Syphilitic Origin."

Pittsburg, June 9, 1905.

To the Editor:—The statement of Dr. John T. Moore in The Journal, June 10, p. 1855, that "practically all authorities agree that epilepsy, coming on during adult life, unless directly traceable to injury, should be regarded as syphilitic in character" ought not to pass without protest. Certainly the possibility of syphilis should be carefully considered; but there are other causes, among them innocent arteriosclerosis certainly may be reckoned and it would be wrong to give prolonged antisyphilitic treatment in all cases of epilepsy in which the attacks first appear in adult life and which are not traceable to injury. Theodore Diller.

Report of Acetanilid Mixtures.

Brooklyn, June 8, 1905.

To the Editor:—Allow me, as a subscriber to The Journal, to add my word of approbation for the work of the Committee on Chemistry. The results of this investigation are most profitable to us all as practicing physicians, and perhaps the word of good cheer for this undertaking from many quarters will not be amiss. I only hope that this work may continue.

Harris Moak.

Whereabouts of Mr. Orriss Wanted.

Princess Anne, Md., June 10, 1905.

To the Editor:—A Mr. A. W. Orriss is operating among physicians, exchanging old medical books for new ones. Will any one knowing the whereabouts of such a person kindly communicate with Chas. W. Wainwright, M.D.

Association News

Additional Through Train on Canadian Pacific.

To accommodate a number of members who wish to go to the Portland session over the Canadian Pacific Railway, that road announces that a special sleeping car for physicians and their friends will be attached to their train leaving St. Paul at 9:05 a. m., Tuesday, July 4, reaching Banff, Friday at 7:06 a. m.; Vancouver, Saturday at 10:45 a. m., and Seattle via Victoria and Puget Sound at 10:45 Saturday evening or all-rail by way of Mission Junction, at 5:50 p. m. Saturday. Stopovers may be made at the various mountain resorts. Application for sleeping car space should be made at once to A. C. Shaw, 232 South Clark Street, Chicago. The beauties of this route were described in the Portland issue of The Journal, June 3. 1905, pages 1761-1779.

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[1] The Journal, May 27, 1905, p. 1689.

To Portland via San Francisco.

A number of members expect to go to Portland by way of San Francisco, stopping at the meeting of the American Surgical Association, to be held in the latter city July 4-7. The Chicago, Union Pacific and Northwestern Line will run a special car or cars on their through train, leaving Chicago Thursday, June 29, 8:02 p. m., Des Moines, Friday, June 30, 3:00 a. m., and Omaha, 9:15 a. m.. Ogden, Saturday, July 1, 3:30 p. m.. and arriving at San Francisco, Sunday, July 2, 5:50 p. m. The same schedule without change of cars is in operation every night, but on June 29, arrangements have been made by Drs. J. B. Murphy, A. J. Ochsner, A. D. Bevan and E. W. Andrews of Chicago; D. S. Fairchild, Des Moines; A L. Wright, Carroll, Iowa; B. F. Jones, Omaha; Miles F. Porter, Ft. Wayne. Ind., and others to make the journey more pleasant by traveling together. One sleeper is to run from St. Paul and Minneapolis to Omaha and there to be attached to the regular train. Reservations may be made through Mr. H. A. Gross, general passenger agent, C. & N. W. Ry., 212 Clark St., Chicago. or through any nearer agent of that railroad or of the Union Pacific. From San Francisco the members of the party will go to Portland by the coast steamers or by the Southern Pacific's beautiful Mt. Shasta line. In this connection, see the Portland number, June 3, and also the article on routes April 22.

Marriages

Emil Lofgren, M.D.. to Miss Alina Nelson, both of Rockford, Ill., June 7.

Robert R. Wallace, M.D., to Miss Jean Leslie, both of Hamilton, Ont.. June 1.

George A. Ulrich, M.D., to Miss Hester D. Ralston, both of Philadelphia, June 7.

Augustine Palmisano, M.D., to Miss Sara Mary Demares, at Baltimore, June 7.

A. J. Burridge, M.D., Winnipeg, Man., to Miss Duncan of Nelson, Man., June 1.

Thomas Herbert Bell, L.C.R.P., to Miss Minnie Darling of Toronto, Ont., June 1.

Philip J. Davies. M.D., to Miss Katherine Johnson, both of Scranton, Pa., June 1.

Louis F. O'Neill, M.D., to Miss Mary F. Hanlon, both of Auburn, N. Y., June 6.

Mervyn Ross F. Taylor, M.D.. to Miss Jeanette Riley, both of Philadelphia, June 7.

George R. Tabor, M.D., to Miss Cordelia Ann Barton, both of Austin, Texas, June 1.

Orris F. Starr, M.D., Tulsa, I. T.. to Miss Mary E. Hughes of Vinita, I. T., May 25.

Arthur C. Klentgen, M.D., Chicago. to Miss Mildred King of Belvidere, Ill., June 3.

James M. Dell, M.D.. Gainesville, Fla., to Miss Johnnie Liddon of Ocala, Fla., June 7.

J. Clay Ross, M.D.. Louisville, Ky., to Miss Mamie Massie of Hopkinsville, Ky.. June 6.

Lillie Rosa Minoka, M.D., Philadelphia, and Charles A. Hill of Oneida, Wis., June 6.

Robert M. Lapsley, M.D.. Keokuk, Iowa, to Miss Lyda Hiller of Kahoka, Mo., June 7.

Charles H. Cretzmeyer, M.D., Algona, Iowa, to Miss Maude Lowe of Osceola, Iowa. June 5.

Daniel W. Layman, M.D., Indianapolis, to Miss Maude Carroll, at Lynchburg, Va., June 7.

Howard Roy Hess, M.D., Sidney. Ill., to May Katherine Gilmore of Rock Island, Ill., June 8.

John Nellis Daly, M.D., Orangeville, Ill., to Miss Laude Hoyman of Freeport, Ill., June 1.

Carl Klemer, M.D., Faribault, Minn., to Miss Anna Burnham of Red Wing, Minn., June 6.

Charles Bledsoe Crute, M.D., to Miss Elizabeth Robertson Martin, at Farmville, Va., June 7.

Ralph Benjamin Cox, M.D., to Miss Florence Bertha Hough, both of Collinsville, Conn., June 1.

William Dudley Spearman, M.D., to Miss Edna Gunter, both of Social Circle, Ga., June 14.

John W. Laird, M.D., Mount Pleasant, Iowa, to Miss Ora Alton of Hillsboro, Iowa, June 14.

Comptom Riely, M.D., Baltimore, to Miss Estelle Randolph Hughes, at Cambridge, Md., June 6.

Coleman L. Hoffman, M.D., Rockton, Ill., to Miss Sarah Olivia Paine, of Iowa City, June 1.

James Edward Cogan, M.D., to Miss Katherine May Gleason, both of Cleveland, Ohio, June 1.

Charles C. Stauffer, M.D., Harrisburg, Pa., to Miss Hanna G. Henry, of Zoyertown, Pa., June 1.

Frank Louis Stillman, M.D., to Miss Elouise Landon Converse, both of Columbus, Ohio, May 30.

Alvan W. Sherrill, M.D., Markleton, Pa., to Miss Mary Elizabeth Jones of Allegheny, Pa., June 7.

James J. P. Armstrong, M.D., to Mrs. M. E. Skipper, both of Douglas, Ariz., at Crowley, La., June 1.

Herman Edwin Hasseltine. M.D., New York, to Miss Bertha Margery Mohl of Baltimore, June 6.

William G. Smith, M.D., Ravenna, Ohio, to Mrs. Mae E. Sawyer of Kent, Ohio, at Ravenna, June 1.

Harris Royal Moore, M.D., Burlington, N. C., to Miss Alice Mutter Cheek of Henderson, N. C., June 15.

Luther Jerrell Head, M.D., Penola, Va., to Miss Lucy Gwynn Fox, in King William County, Va., June 7.

James A. Rea, M.D., Wellington, Kan., to Miss Kate Rowe of Lamont, Iowa, at Newkirk, Okla., May 28.

Norman B. Alexander, M.D., London, Ont., to Miss Maude Amelia Somerville of South London, Ont., June 3.

Earl D. Kilmer, M.D., Rushvule, N. Y., to Miss Marie Parsons of Walsall, England, at Rochester, N. Y., May 29.

John H. Kern, M.D., North St. Louis, Mo., to Miss Rosamond Reck of Spragueville, Iowa, at Warrenton, Mo., June 6.

Deaths

Joseph M. Wishard, M.D. Medical College of Ohio, Cincinnati, 1857, said to have been the oldest member of the Johnson County Medical Society and one of the oldest members of the Indiana State Medical Society; surgeon of the Fifth Indiana Volunteer Cavalry during the Civil war, and for several months a prisoner in Libby Prison, died at his home in Greenwood, Ind., May 31, from the effects of a fall 20 months ago in which he dislocated his thigh, aged 77.

Lawrence C. Swift, M.D. College of Physicians and Surgeons in the City of New York, 1878, a member of the American Medical Association; secretary of the Berkshire District (Mass.) Medical Society; associate medical examiner for central Berkshire county, died at his home in Pittsfield, June 1, from cerebrospinal meningitis, after an illness of four days, aged 53.

Benjamin Knight, M.D. Harvard University Medical School, Boston, 1869, for many years local surgeon of the South Pacific Coast and Southern Pacific railroads; a veteran of the Civil War; state senator in 1883 and president pro tem. of the Senate, died at his home in Santa Cruz, Cal., June 2, after a long illness following influenza. aged 68.

Matthew Watson Donavin, M.D. University of Maryland School of Medicine, Baltimore, 1866, some time coroner of Baltimore County, member of the Baltimore City Council, member of the state legislature. and police magistrate, died at his home in Baltimore, June 4, aged 67.

Chauncey S. Burr, M.D. Long Island College Hospital, Brooklyn, N. Y., 1865, major and surgeon of the Twenty-third Illinois Volunteer Infantry in the Civil War, first mayor of Mitchell, S. D., died at his home in Chicago, June 4, three days after a surgical operation, aged 65.

John Brock Darling, M.D. Vermont Medical College, Woodstock, 1848, a practitioner of South Ryegate, Vt, for 55 years, died at his home in that place, February 12, from chronic cystitis, and senile hypertrophy of the heart, after an illness of six months, aged 82.

Hiland A. Weed, M.D. New York University, New York City, 1857, assistant surgeon in the Seventeenth, and surgeon of the Twenty-fifth New York Volunteer Infantry during the Civil War, died recently at his home in Fayetteville, N. Y., aged 71.

James D. Taylor, M.D. St. Louis Medical College, 1861, surgeon of First Missouri Cavalry, C. S. A., in the Civil War, and for more than 40 years a resident of Richmond, Mo., died at his home in that city, May 26, after a short illness, aged 70.

Marion Wells Thoms, M.D. University of Michigan Department of Medicine and Surgery, Ann Arbor, 1898, a medical missionary of the Reformed Church, died at her station on Bahrein Island in the Persian Gulf, from typhoid fever, aged 31.

Vivian E. Zimmerman, M.D. University of Nashville Medical Department, 1901, of Corcordia, Kan., died at the home of his father near Jamestown, Kan., May 21, from consumption, after a long illness, aged 27.

Whitfield L. May, M.D. Jefferson Medical College, Philadelphia, formerly of Lyons, Kan., was found dead at Eureka, Cal., May 25, from heart disease, with alcoholism as a contributory cause, aged 53.

Harry H. East, M.D. Barnes Medical College, St. Louis, 1890, of Xenia, Ill., while suffering from melancholia, cut his throat at the Alexian Brothers' Hospital, St. Louis, and died June 2, aged 45.

Edgar Macklin, M.D., honor graduate of the Western University, Medical Department, London, Ont., 1890, died May 29 at London, Ont. He had served as a surgeon on the Allan Steamship Line.

William J. Sheppard, M.D. University of Wooster Medical Department, Cleveland, Ohio, 1870, of Cleveland, died at Lakeside Hospital in that city, May 29, from cancer, after a long illness, aged 62.

Francis Addison Day, M.D. University of Louisville, Tuley Medical Department, 1850, died at his home in Louisville, May 24, from nephritis, after an illness of sixteen months, aged 78.

A. Parker Muir, M.D. Albany (N. Y.) Medical College, 1896, for a long time a member of the staff of the Manhattan State Hospital, died recently and was buried in Albany, N. Y., June 4.

Charles B. Chesher, M.D. Cincinnati College of Medicine and Surgery, 1876, formerly superintendent of the Cleveland State Hospital, died at his home in Columbus, June 1, from heart disease.

William Isaac Goodin, M.D. Medical College of Ohio, Cincinnati, 1874, died at his home in Cincinnati, May 31, after a long period of invalidism from gastritis, aged 68.

Thomas H. B. Baker, M.D. University of Louisville Medical Department, 1876, died at his home in Pekin, Ind., June 1905, after an illness of about 3 months, aged 67.

DeWitt G. Lippincott, M.D. Jefferson Medical College, 1883, member of Orange County Medical Society, died at his home in Campbell Hall, N. Y., June 7, aged 44.

Chauncey B. Ostrander, M.D. (years of practice, Illinois), 1881, a practitioner of Fairbury, Ill., since 1850, died at his home in that city, May 30, aged 87.

Orville R. Baker, M.D. Ohio about 1849-1850, died at his home in Rutland, Vt., May 26, from senile debility, after an illness of two weeks, aged 81.

Jacob D. Kirby, M.D. Cincinnati, 1868, died at his home in Grand Junction, Iowa, from septicemia, January 30, after an illness of 20 days, aged 77.

Henry F. Crensheno, M.D. (years of practice, Ky.), 1893, for 35 years a practitioner of Mount Washington, Ky., died at his home in that place, June 8.

William K. Spiller, M.D. University of Nashville (Tenn) Medical Department, 1874, died at his home in Bridgeport, Ala., May 25, aged 60.

Alonzo W. Marston, M.D. McGill University Medical Department, Montreal, 1871, died at his home in Hull, Que., April 3, from nephritis.

Henry F. Gorman, M.D. University Medical College of Kansas City, 1900, died at his home in Chickasha, I. T., June aged 57.

Jacob Price, M.D. Jefferson Medical College, Philadelphia, 1850, died at his residence in West Chester, Pa., June 9, aged 79.

N. F. Pierce, M.D. Kentucky School of Medicine, 1889, died suddenly at his home in Howard's Mill, Ky., June 2, aged 42.

John H. Tims, M.D. Examination Ohio, died suddenly at his home in Sparta, Ohio, May 23, from heart disease, aged 87.

Albert D. Getman, M.D. New York, 1883, died at his home in Oneonta, N. Y., May 23, from pneumonia, aged 46.

John Kossuth Oshley, M.D. (years of practice, Illinois), died at his home in Cisne, Ill., May 26, aged 80.

T. G. Flournoy, M.D. St. Louis Medical College, 189, died at his home in Pasadena, Cal., May 26, aged 67.

Julia A. D. Adams, M.D. Ohio, 1871, died in Palos Park, Ill., May 30, aged 74.

Deaths Abroad.

Ezio Sciamanna, M.D., one of the leading psychiatrists of Italy, died at Rome about May 20. He was one of the foremost figures in the International Congress of Psychology which closed its sessions at Rome, April 30.

A. Hilger, M.D., professor of pharmacy at Munich, died May 25, aged 66. He was one of the leaders in this branch of science in Germany, especially in physiologic chemistry.

Book Notice

Manual of Operative Surgery. By John Fairbairn Binnie, A.M., C.M., (Aberdeen), Professor of Surgery, Kansas City Medical College. With 559 Illustrations, a Number of Which Are Printed in Colors. Cloth. Pp. 644. Price, $3.00 net. Philadelphia: P. Blakiston's Son & Co. 1905.

The author is to be congratulated on having been able to condense so much valuable information within so few pages. This book is in a convenient form and size for ready reference and covers this rapidly growing field in a very thorough manner. The descriptions of operative procedures are short and clear. The book reflects throughout the personal views of the author and gives the reader the benefit of his large experience in sifting good from inferior methods. It also states from time to time the objections or disadvantages in such a concise manner that the book can not fail to be of great aid to the student as well as to those who employ the various methods in their daily surgical work. With but few exceptions, all of the latest operative methods are given. Not sufficient mention is made of the Andrews imbrication method for inguinal hernia nor of the Cushing operation for the removal of the Gasserian ganglion nor of the Pfannenstiel transverse incision for laparotomy. All instruments described in the text are well illustrated, but it is to be regretted that so few original illustrations have been employed. The description of the treatment of skull fractures and the operations for removal of tuberculous glands of the neck are exceedingly creditable. A brief review of the principal points in the surgical anatomy would be of great aid. With the exception of these minor details, the book is a very useful guide for the busy surgeon, as well as for the medical student.

Miscellany

ISTHMIAN SANITATION.

Letter from Secretary Taft to Colonel Gorgas Concerning Panama Matters.

War Department, Washington, D. C., April 25, 1905.

Col. W. C. Gorgas, Chief Sanitary Officer, Isthmian Canal Commission.

My Dear Colonel Gorgas:—I have read your letter of April 1, forwarded to me through the governor of the Canal Zone, and in response thereto beg to point out that under the new organization the difficulties which have confronted you in making the sanitation of the Isthmus efficient must largely disappear.

The chief change will be in bringing to your door the power to buy supplies without any delay. The executive committee will be in constant session on the Isthmus, and whenever you desire extraordinary orders all you have to do is to apply to Governor Magoon, who can call the committee together and issue the order, even though the chairman, Mr. Shonts, be absent. Governor Magoon has already manifested his desire to accord with your wishes by increasing the salaries of your medical assistants. . . . With greater facilities for obtaining supplies I have no doubt that construction will go forward much more rapidly than it has heretofore. Judge Magoon will go down to the Isthmus on the thirteenth day of May and will be soon followed by Mr. Wallace and Mr. Shonts. The power is to be there, and proximity to power is what produces efficiency and quickness in action. The time spent here is taken up in reorganizing the office, which was in a state of inefficiency and chaos.

I think you are doing very well, indeed, in the suppression of yellow fever, and I hope that with the coming of supplies and of new conditions under which you will be less hampered than you have been heretofore by the absence of authority, your ability to deal with malarial fever and the whole problem of sanitation will be made apparent. You could not have any one to work with more anxious to comply with your desires than Judge Magoon. . . .

With congratulations on your good work, believe me, my dear doctor. Very sincerely yours,

William H. Taft.

[The above letter has recently come into our possession, with permission for its publication. It is interesting in that it shows the change that has taken place in the management of affairs on the Isthmian Canal Zone. A careful reading of the letter reveals the fact that underlying it is a recognition of the bad condition of affairs preceding the reorganization. For instance, this sentence is full of meaning, "The time spent here is taken up with reorganizing the office which was in a state of inefficiency and chaos." It is corroborative of some of the charges made by Dr. Reed in his report. The letter further officially informs us of the enlarged authority and opportunities that have been granted to the chief sanitary officer. Dr. Gorgas, by the new commission.—Ed.]

Queries and Minor Notes

Anonymous Communications will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

NEW TECHNIC FOR CIRCUMCISION.

Ancon, Canal Zone, May 29, 1905.

To the Editor: For several years I have been doing an operation for circumcision that I do not see described in any of the text-books on surgery. The method, so far as I know, is an original one, and unless some one else has described the technic of the operation, or a similar one, I shall be glad to publish the result of my cases. The operation as done by me is briefly as follows: 1. The mons jovis is shaven and prepared in the usual way. 2. An incision circumnavigates the penis, going through the skin only, at the root of the organ. 3. The skin is dissected and drawn back to correspond with the length of the foreskin. 4. A second incision is made as in the second step. 5. The sutures are so placed as to allow perfect apposition. The advantages of this simple operation are apparent, and I should be grateful if you would tell me, through The Journal, whether this or a similar operation has ever been advised.

M. E. Gardner, M.D.

Answer.—We are unable to find this method of operating described in any of the text-books on surgery. The method does not seem to us to be adapted for children nor even for adults unless the prepuce is very short, because the tightness of the foreskin and the lesions would not be affected by it. The object of circumcision is to make the prepuce loose enough to be readily retracted, not to shorten it so that it will remain retracted.

PRACTICE LAWS IN ALBERTA, CANADA.

Tulsa, I. T., May 30, 1905.

To the Editor:—Please state the requirements of the laws governing the practice of medicine and surgery in the province of Alberta, Canada.

G. R. B.

Answer.—The Council of the College of Physicians and Surgeons of the Northwest Territories admits on the register: 1. Any person possessing a diploma from any medical school in Great Britain and Ireland having power to grant such diploma, and who produces such diploma and furnishes satisfactory evidence of identification. 2. Any member of an incorporated college of physicians and surgeons of any province of the Dominion of Canada. 3. Any person producing a diploma from any recognized medical college requiring a four years' course; provided, the applicant passes a satisfactory examination before the council. The registrar is Dr. J. D. Lafferty, Calgary.

OSTEOPATHS ARE GETTING THERE FAST.

We have received a circular that is being sent out by an osteopath of Kansas City which indicates that osteopaths not only are using medicines, but also are right in front with the unadulterated nostrum exploiters:

> For the past five years I have been making a specialty of skin diseases, and am able to say that we can handle this class of practice just as successfully as we do the others. Osteopaths all over the country have used my antiseptic treatment and with the fullest measure of success.
>
> This antiseptic is made according to the requirements of each case and in the way best suited to the case. I now make it as a liquid, a light lotion, a heavy lotion, a liquid ointment, and an ointment. You tell me of the case and I will give you what is best according to my experience. And you may rest assured that I give your cases the same attention I give my own. [Probably true.] Seven packages, retailed at $1.00 each, constitutes a month's treatment for Acne, Eczema or Psoriasis. It lasts the average case, from six to eight weeks, and I sell it to you for $5.00. To get the best results the patient should be required to pay for the antiseptic. [This is very important.] I find that diet is an essential in the successful treatment of all skin diseasees and in each instance I suggest the diet in full.
>
> I have often been asked to supply the antiseptic in a way that it could be used whenever an antiseptic is required. For a short time I am going to sell a full quart of the preparation for $2.00. You should sell it in four ounce bottles at $1.00 each, or $8.00 for the quart. You simply can't get results if you give it away. [What results? Dollars?] I have tried it often enough to know. This quart can be used for any ailment excepting Acne, Eczema or Psoriasis—but it is not made in the right way or of a sufficient strength for either of these ailments.

Then follow the usual testimonials, of which the following is a sample:

> I used your antiseptic on a very bad case of Barbers' Itch, and at the end of three weeks' time a cure was effected. I gave Osteopathic treatment to equalize the circulation and used the liquid full strength.—Drs. Hook & Hook, Belding, Mich.

The names of these and the other individuals are not in any of the late medical directories. If we are to judge by some of the testimonials, the osteopaths are using medicines in states (Kentucky, Missouri, Michigan and Pennsylvania) in which they are licensed on condition that they do not use drugs.

State Boards of Registration

COMING EXAMINATIONS.

Board Representing the President and Fellows of the Medical Society of Delaware, Dover, June 20-22. Board Representing the Homeopathic Medical Society of Delaware, Wilmington, June 20-22. Secretary of the Medical Council of Delaware, P. W. Tomlinson, M.D., Wilmington.

State Board of Medical Examiners of New Jersey, Trenton, June 20-21 Secretary, E. L. B. Godfrey, M.D., Camden.

Medical Examining Board of Virginia, Richmond, June 20-24. Secretary, R. S. Martin, M.D., Stuart.

Board of Medical Examiners of Maryland, Baltimore, June 21-24. Secretary, J. McP. Scott, M.D., Hagerstown.

Medical Council of Pennsylvania, Philadelphia and Pittsburg, June 27. Secretary of the Medical Council, H. C. Shaeffer, M.D., Harrisburg.

Board of Medical Examiners, Central District, I. T., South McAlester, I. T., July 3. Secretary, B. W. Caldwell, Hugo

Board of Medical Examiners of Arizona, Phoenix, Ariz., July 3-4. Secretary, A. Martin, Phoenix.

Utah State Medical Examiners, Salt Lake City, Utah, July 3-4. Secretary, R. W. Fisher, Salt Lake City.

North Dakota State Medical Examining Board, Grand Forks, July 5. Secretary, H. M. Wheeler, Grand Forks.

State Medical Examining Board of Washington, Seattle, Wash., July 5. Secretary, C. W. Sharples, Seattle.

State Medical Examining Boards of the Regents, State House, Concord, N. H., July 7-8. Regent. H. C. Morrison, Concord.

State Medical Board of the Arkansas Medical Society, Little Rock, July 11. Secretary, J. P. Runyan, Little Rock.

Rhode Island State Board of Health, State House at Providence, commencing at 9 a. m., July 11. Secretary, G. T. Swarts, State House, Providence.

Wisconsin Board of Medical Examiners, Park Hotel, Madison, Wis., July 11. Secretary. F. A. Forsbeck, Milwaukee.

State of Connecticut Medical Examining Board, City Hall, New Haven, Conn., July 11-12. Secretary. C. A. Tuttle, New Haven.

Maine Board of Registration of Medicine, State House, Augusta, Maine, July 11-12. Secretary, Wm. J. Maybury, Saco.

Vermont State Board of Medical Registration, Y. M. C. A. Hall, Burlington, Vt., July 11-12-13. Secretary, W. Scott May, Underhill.

Kansas State Board of Medical Registration and Examiners, State House, Topeka, Kan., July 12-13. Secretary, G. F. Johnston, Lakin.

South Dakota Board of Medical Examiners, Sioux Falls, S. Dak., July 12 13. Secretary, H. E. McNutt, Aberdeen.

Board of Medical Supervisors, Washington, D. C., July 13. Secretary, Wm. C. Woodward, Health Department, Washington.

California State Board of Medical Examiners, San Francisco and Los Angeles, Cal., July 19. Secretary, C. L. Tisdale, San Francisco.

North Carolina May Report.—Dr. George W. Pressly, secretary of the Board of Medical Examiners of the State of North Carolina, reports the written examination held at Greensboro, May 17-23, 1905. The number of subjects examined in was 13; total number of questions asked, 70; percentage required to pass, 80. The total number of applicants examined was 133, of whom 92 passed, 40 failed and 1 withdrew. The following colleges were represented:

PASSED.

College.	Year Grad.	Per Cent.
Rush Medical College	(1897)	92
Woman's Med. Coll. of Pennsylvania	(1905)	91.8
University of Alabama	(1890)	82.2
University of Pennsylvania	(1902)	87.2
Harvard University	(1899)	89.5
Med. Coll. of South Carolina	(1900)	80
University of Nashville	(1904)	80.1
Washington University	(1902)	87.8
Medico-Chirurgical, Philadelphia	(1905)	87.7
Northwestern University	(1896)	80
Columbian University	(1904)	89.7
Univ. of Copenhagen, Denmark	(1869)	80
Coll. of P. & S., Baltimore	(1905)	80
Tennessee Med. Coll.	(1901)	81.4, 80
McGill University	(1876) 80; (1899)	83.1
University of the South	(1903)	83.1
Tulane University	(1905)	85.5, 80
Louisville Med. Coll.	(1905)	80, 80
Coll. of P. & S., New York	(1904) 91.1; (1894)	94.5
Johns Hopkins University	(1904) 90.8; (1900)	81.7
Baltimore Med. Coll.	(1896) 80; (1905)	80
Leonard Med. Coll.	(1905) 84.5, 80, 86.1; (1904) 80; (1902)	80
Jefferson Med. Coll.	(1904) 84.8, 88.2; (1905) 92.7, 80, 86.2,	89.5
University of Virginia	(1902) 80.2; (1903) 90.1; (1897)	87.8
Med. Coll. of Virginia	(1903) 80; (1905) 89.2,	85.1
University Coll. of Med. Richmond	(1900) 84.4; (1903) 93.1; (1905) 81.4, 85.2, 86.4, 89.4, 89.1,	91.5
University of North Carolina	(1905) 91.2, 80, 80, 80, 85.7,	95.8
University of Maryland	(1905) 85.8, 90.1, 82.4, 88.1, 80, 82, 86.2, 87.8, 80; (1904) 80; (1900)	80.7
North Carolina Med. Coll.	(1905) 80, 82, 84.1, 83.4, 86.5, 89.2, 85.4, 88.2, 87.7, 92.4, 92.1, 88.2, 88.7, 82.2, 80, 80, 80, 81.2, 84.1, 93.4, 80,	80
Meharry Med. Coll.	(1904)	60
Hosp. Coll. of Med. Louisville	(1898)	56.7
Maryland Med. Coll.	(1901)	59.5
Atlanta Med. Coll.	(1896)	65.5
Vanderbilt University	(1893)	65.5
Tennessee Med. Coll.	(1902)	63.5
University of North Carolina	(1905)	76.7
Coll. of P. & S. Baltimore	(1905)	71
Med. Coll. of Virginia	(1905)	70, 69.7
University of Tennessee	(1902) 72.8; (1904)	68
Coll. of P. & S., Atlanta	(1902) 64.1; (1900)	74.2
University of Kentucky	(1904) 66.7; (1905)	75.2
Knoxville Med. Coll.	(1904)	68.1 70.1
Chattanooga Med. Coll.	(1900) 66.8; (1903) 45; (1904) 70.5; (1905)	74.8
University of Maryland	(1905) 75.2, 76.1; (1904) 63.2, 71.1; (1903)	76.1
Leonard Med. Coll.	(1902) 68.1; (1905) 70, 67.1, 75, 74.4,	70.1
North Carolina Med. Coll.	(1905) 67.5, 74.5, 70.4, 75; (1903) 77; (1902)	72.1

One withdrew from examination.

The following questions were asked:

CHEMISTRY.

1. What are hydrates? 2. Distinguish between deliquescent and efflorescent substances. 3. What is alcoholic fermentation? 4. Give name and formula of three acids used in medicine. 5. Write a chemical equation. 6. Chemical antidote for nitrate of silver. 7. What is contained in the so-called hard waters? 8. Name the inorganic salts of the blood. 9. Normal temperature of the body in centigrade scale. 10. Convert 1 c.c. of water to minims. 11. What is iodoform chemically? 12. Complete the following:

$K_2 CO_3+H_2O+CO_2=$

$Ca Cl_2+ Na_2 CO_3=$

$2 C_2 H_5 O H+HNO_3=$

(Answer and ten questions and *only* ten.)

SURGERY.

1. Give etiology of erysipelas, carbuncle, septicemia. 2. Give general plan of treatment in cases of inflammation and suppuration. 3. Give the general and local treatment of hemorrhage. 4. Give in detail the preparation of a patient for laparotomy. 5. Give treatment of acute suppurative osteomyelitis. 6. Give treatment of compound fracture of lower one-third of femur. 7. Describe circular method of amputation through upper one-third of leg. 8. Give causes and symptoms of compression of brain. 9. Diagnosis of penetrating wounds of abdomen.

PRACTICE OF MEDICINE.

1. Give etiology of lobar pneumonia. 2. Give the symptoms of hemorrhage in typhoid fever. 3. Define locomotor ataxia and give the anatomic lesion. 4. Give treatment for sciatica. 5. Where is the point of tenderness in appendicitis, in hepatic colic (cholocystalgia), in nephritic colic (nephralgia) of right side? 6. Give treatment for gonorrheal arthritis. 7. Give treatment for aortic stenosis. 8. Give symptoms of tubercular kidney. 9. Write a single prescription for erysipelas. 10. Outline briefly the treatment of glycosuria.

OBSTETRICS, GYNECOLOGY AND PEDIATRICS.

1. The true pelvis—describe the superior strait, the inferior strait, giving boundaries of each. 2. Describe preparation for delivery after labor has actually begun, the necessary articles to be gotten together, preparation of patient, physician, patient's bed, etc. 3. Give treatment of delay in the first stage of labor. Treatment for antepartum eclampsia at sixth or seventh month. 4. Give differential diagnosis between pregnancy at the third month and an interstitial fibroid of the uterus. 5. Give etiology and symptoms of pelvic cellulitis. 6. Give symptoms and treatment of endometritis. 7. Give directions for care of new-born baby for the first twelve hours after birth. 8. Give symptoms and treatment of acute catarrhal bronchitis in a child two years old. 9. Give etiology, lesions, prophylaxis and treatment of acute gastroenteric infection (summer diarrhea in children). (Answer any eight questions and *only* eight.)

MATERIA MEDICA AND THERAPEUTICS.

1. Give dose and physiologic action of ipecacuanha, mention alkaloids. 2. Dose and physiologic action of chloral hydrate. 3. Give preparations of nux vomica, doses, its principal alkaloid, symptoms of lethal dose. 4. Give technical name of Jamestown weed, its alkaloids, symptoms and treatment of poisoning by. 5. Cocain, dose, toxic symptoms and treatment. 6. Gelsemium, dose of tr. and f. e., its alkaloid and dose, symptoms and treatment in case of poisoning. 7. Physiologic action of cannabis indica. 8. Explain effect of acetanilid and the cyanosis it sometimes produces, dose. 9. Give dose and therapeutic uses of spartein. 10. If any reason why these combinations should not be used, give them. (1) Pulv. ipec. acid. tannic, plumbi acet. (2) Antipyrin, spts. æther nitrosi, (3) Tr. ferri., tr. nuc. vom., tr. cinch. co. (4) Cocain hyd., sodii borat., aq. rosae. (5) Potassii permang., hydrogen perox, aq. destil. (6) Spts. turpentine, tr. iodin, lin. chlorof.

ANATOMY AND HISTOLOGY.

1. Describe the upper extremity of the humerus. 2. Describe the middle meningeal artery (meningea magna) after it emerges from the foramen spinosum, giving its distribution; state at what point you would trephine to stop hemorrhage from this vessel. 3. Describe the island of Riel (or insula) or central lobe. 4. Describe and give the relations of the tonsils. 5. Describe and give relations of the internal mammary artery. 6. Give the relations of the left kidney. 7. What are the boundaries of the femoral canal and give the relations which it bears to the deep epigastric and obturator arteries and the spermatic cord. 8. Give attachments of the ligaments of the hip joint. 9. Give the origin and distribution of the fourth pair of cranial nerves (pathetic nerve). 10. Give the distribution of the musculo-spiral nerve and name its branches. (Answer only eight questions.)

PHYSIOLOGY AND HYGIENE.

1. What action has pancreatic juice on nitrogenized substances? 2. How is inspired oxygen absorbed into the system? 3. What conditions modify temperature in the body? 4. Name the vascular or ductless glands. 5. Give origin and functions of bile. 6. Give functions of liver. 7. Give functions of cerebellum. 8. Give functions of anterior roots of spinal cord. 9. What nerve endows the tongue with motion? 10. Differentiate between antiseptic and a disinfectant.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, for the week ending June 10, 1905:

Bruns, Earl H., asst.-surgeon, assigned to duty at the Sequoia National Park, Cal., relieving Assistant Surgeon Kiersted.

Kiersted, Henry S., asst.-surgeon, on being relieved from duty at the Sequoia National Park, Cal., will return to station, Presidio of Monterey, Cal.

Gibner, Herbert C., asst.-surgeon assigned to duty at the Yosemite National Park, Cal., to relieve Major Reynolds, surgeon.

Reynolds, F. P., surgeon, relieved from duty at Yosemite National Park, and to return to station at Presidio of San Francisco.

Smith, Herbert M., asst.-surgeon, relieved from further duty at Fort McDowell, Cal., and ordered to U. S. Army General Hospital, Presidio of San Francisco, for duty.

Blanchard, R. M., asst.-surgeon, left Fort Thomas, Ky., on ten days' leave of absence.

Roberts, William, asst.-surgeon, relieved from temporary duty at Fort Greble, R. I., and to return to his station, Fort Hamilton, N. Y.

Shimer, Ira A., asst.-surgeon, left Washington, D. C., en route to Ancon, Isthmian Canal Zone, for duty with the Isthmian Canal Commission.

Reilly, John J., asst.-surgeon, relieved from further duty at Jackson Barracks, La., and ordered to Fort Slocum, N. Y.

Dale, Frederick A., asst.-surgeon, relieved from duty at U. S. Army General Hospital, Washington Barracks, D. C., and ordered to Fort Walla Walla, Wash., for duty.

Chidester, W. C., asst.-surgeon, ordered to accompany Companies A and B, First Battalion Engineers, from Fort Leavenworth, Kan., to San Francisco; on completion of this duty to revert to status of leave of absence.

Powell, Junius L., surgeon, left Fort Hamilton, N. Y., on ten days' leave of absence.

Bartlett, C. J., asst.-surgeon, reported for temporary duty as attending surgeon and examiner of recruits, San Francisco.

Porter, R. S., asst.-surgeon, left Fort Niobrara, Neb., on leave of absence.

Reno, Wm. W., asst.-surgeon, relieved from temporary duty at Washington Barracks, D. C., and from duty with troops at Saunder's Ridge, Md., and ordered to return to his station. Fort Myer, Va.

Crabtree, Geo. H., asst.-surgeon, ordered to proceed from Fort Jay, N. Y., to Fort Monroe, Va., for duty in connection with the joint Army and Navy exercises.

Brooke, Roger, Jr., asst.-surgeon, having arrived at San Francisco, from Manilla, P. I., will report to commanding officer, Fort Bayard, N. M., for duty at the General Hospital.

Dale, Frederick A., asst.-surgeon, granted two months and fifteen days' leave of absence.

Ames, Roger P., contract surgeon, granted leave of absence for one month.

Macy, Fred S., contract surgeon, granted leave of absence for one month.

Sievers, Robert E., contract surgeon, leave of absence extended twenty days.

Slater, Ernest F., contract surgeon, leave of absence granted for one month sixteen days, with permission to go beyond sea.

Hogue, Gustavus I., contract surgeon, leave of absence granted for one month.

Dillon, G. Parker, contract surgeon, relieved at the General Hospital, Presidio of San Francisco, and ordered to duty at Fort McDowell, Cal.

Scott, Sidney L., contract surgeon, ordered from Fredericksburg, Va., to Washington Barracks, D. C., for duty with troops at Camp Saunders, Glen Burnie, Md.

Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending June 10, 1905:

Stitt, E. R., surgeon, detached from the Naval Museum of Hygiene and Medical School, Washington, D. C., June 5, and ordered to the Naval Hospital, Canacao, P. I., sailing from New York about June 10.

Eytinge, E. C. J., asst.-surgeon, ordered to the Naval Hospital, New York.

Farwell, W. G., asst.-surgeon, detached from the Naval Hospital, New York, and ordered to the *Brooklyn*.

Bishop, L. W., P. A. surgeon, detached from the Naval Museum of Hygiene and Medical School, Washington, D. C., and ordered to the *Dubuque*.

Murphy, J. F., asst.-surgeon, detached from the *Dubuque* and ordered to continue duties on the *Hancock*.

Mayers, G. M., asst.-surgeon, ordered to Washington, D. C., for examination for promotion, and then to wait orders.

The following passed assistant surgeons have been ordered to report to the president of the Naval and Medical Examining Boards for examination for promotion, June 26, 1905, and then to wait orders: F. M. Furlong, J. F. Leys, W. M. Garton, F. L. Benton and J. C. Thompson.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending, June 7, 1905:

Sawtelle, H. W., surgeon, relieved from duty at Purveying Depot, New York, and directed to proceed to Washington, D. C., for special temporary duty.

Stoner, G. W., surgeon, to proceed along Canadian border as far as Sault Ste Marie, Mich., stopping at intermediate points, especially Quebec, Montreal, Niagara Falls and Detroit, on special duty.

Oakley, J. H., P. A. surgeon, detailed as inspector of unserviceable property at the U. S. Marine Hospital, Port Townsend, Wash.

Clark, Taliaferro, P. A. surgeon, granted leave of absence for three days from June 7, 1905, under Paragraph 191 of the Regulations.

Kerr, J. W., P. A. surgeon, granted leave of absence for one month from June 15.

Salmon, T. W., asst.-surgeon, granted leave of absence for five days from June 4, 1905, under Paragraph 191 of the Regulations.

Spratt, R. D., asst.-surgeon, relieved from duty at New Orleans, La., and assigned to duty at Louisville, Ky., effective June 15, 1904.

Porter, J. Y., sanitary inspector, granted leave of absence for seven days from June 20.

Bean, L. C., acting asst.-surgeon, granted leave of absence for three days from June 8.

McConnell, E. F., acting asst.-surgeon, relieved from duty at Nuevitas, Cuba, and directed to proceed to New York and report to Surgeon G. W. Stoner, Ellis Island, for duty.

Mason, W. C., acting asst.-surgeon, granted leave of absence for five days from June 26.

Ransom, S. A., acting asst.-surgeon, granted leave of absence for two days from May 3.

Achenbach, J., pharmacist, granted leave of absence for sixteen days from June 13.

Health Reports.

The following cases of smallpox, yellow fever and plague have been reported to the Surgeon General, Public Health and Marine-Hospital Service, during the week ended June 10, 1905:

SMALLPOX—UNITED STATES.

California: Los Angeles, May 20-27, 1 case.

Florida: Jacksonville, May 27-June 3, 3 cases.

Illinois: Chicago, May 27-June 3, 18 cases; Danville, May 5-31, 7 cases; Galesburg, May 27-June 3, 3 cases.

Kansas: Wichita, April 29-May 27, 21 cases.

Louisiana: New Orleans, May 28-June 3, 5 cases.

Massachusetts: Haverhill, May 27-June 3, 1 case.

Michigan: Grand Rapids, May 27-June 3, 10 cases, 1 death.

Nebraska: Omaha, May 27-June 3, 2 cases.

New York: New York, May 27-June 3, 1 case.

Ohio: Toledo, May 20-June 3, 15 cases.

Pennsylvania: May 27-June 3, Altoona, 1 case, imported; Lebanon, 1 case; York, 10 cases.

South Carolina: Greenville, May 20-27, 2 cases.

Tennessee: May 27-June 3, Memphis, 1 case; Nashville, 5 cases.

Utah: Ogden, May 1-31, 7 cases.

Wisconsin: Appleton, May 27-June 3, 2 cases; Milwaukee, May 20-27, 3 cases.

SMALLPOX—INSULAR.

Philippine Islands: Manila, April 8-29, 3 cases.

SMALLPOX—FOREIGN.

Africa: Cape Town, April 15-22, 1 case.

Belgium: Ghent, April 29-May 6, 1 death.

Brazil: Rio de Janeiro, May 7-14, 8 cases, 3 deaths.

China: Hongkong, April 8-15, 3 cases, 1 death.

Ecuador: Guayaquil, May 2-9, 3 deaths.

France: Paris, May 13-20, 18 cases, 2 deaths.

Great Britain: Bristol, May 6-20, 2 cases; Liverpool, May 6-13, 1 case; London, May 13-20, 3 cases, 1 death; New Castle-on-Tyne, May 6-13, 7 cases; South Shields, May 6-20, 5 cases.

India: Bombay, May 2-9, 37 deaths; Calcutta, April 15-May 6, 24 deaths; Karachi, April 30-May 7, 11 cases, 3 deaths; Madras, April 29-May 5, 4 deaths.

Italy: General, May 4-11, 111 cases; Catania, May 18-25, 7 deaths; Palermo, May 13-20, 1 case.

Japan: Yokohama, April 2-9, 1 case.

Russia: Moscow, May 6-13, 7 cases, 2 deaths; Odessa, April 22-May 6, 15 cases, 4 deaths; St. Petersburg, April 15-May 6, 32 cases, 8 deaths; Warsaw, March 11-18, 1 death.

Straits Settlements: Singapore, April 15-29, 4 deaths.

YELLOW FEVER.

Brazil: Rio de Janeiro, May 7-14, 42 cases, 18 deaths.

Ecuador: Guayaquil, May 2-9, 5 deaths.

Mexico: Tierra Blanca, May 21-27, 1 case.

Panama: Colon, Jan. 23-May 29, 15 cases; Panama, Jan. 1-May 25, 65 cases.

PLAGUE—INSULAR.

Philippine Islands: Manila, April 8-29, 1 case, 1 death.

PLAGUE—FOREIGN.

Africa: Cape Colony, April 15-22, 8 cases, 6 deaths.

Arabia: Eden, April 28-May 12, 10 cases, 10 deaths.

Australia: Brisbane, April 1-8, 1 case.

China: Hongkong, April 8-15, 1 case, 1 death.

India: General, April 18-22, 64,214 cases, 54,602 deaths; April 22-29, 67,086 cases, 56,732 deaths; Bombay, May 2-9, 702 deaths; Calcutta, April 15-May 6, 1,867 deaths; Karachi, April 30-May 7, 202 cases, 189 deaths; Madras, April 22-May 5, 2 deaths; Rangoon, April 1-8, 613 cases, 539 deaths.

Japan: Tokyo, May 10, 1 case.

Peru: Chiclayo, April 16-30, 4 cases, 8 deaths; Eten, April 16-23, 2 cases, 1 death; Lima, April 16-30, 6 cases, 2 deaths; Mollando, April 16-23, 13 cases, 3 deaths.

Medical Organization

ORGANIZATION WORK AND PROFESSIONAL CONDITIONS IN PENNSYLVANIA.

J. N. McCORMACK, M.D.

Chairman of the Committee on Organization of the American Medical Association.

BOWLING GREEN, KY.

I have been almost constantly engaged for five years in organization work in states and sections where the medical profession was just beginning to awaken to the possibility and importance of such a utilization of all of the forces at its command for the protection and advancement of its own and the public interests. After this extended experience in fields where the movement was in the initial and experimental stage, I was especially anxious to visit one of the representative states which had long been operating under the county society system and to go over it in such a way as would enable me to make a careful and comparative study of the results of that system on the life and work of the individual physician, and on the profession as a whole. In return for the information thus obtained I hope that it will not be unprofitable for me to give to those older in this work the information and impressions received in my large and varied experience.

Almost an ideal opportunity for such study and comparison was afforded in an extended itinerary arranged for me, after much thought and labor, by Dr. Cyrus L. Stevens, the efficient secretary of the Medical Society of the State of Pennsylvania. The appointments began at Johnstown in the evening of May 8 last, where the practical benefits to both the profession and people which would result from real organization were discussed before and with a semi-popular audience, made up of representative laymen and physicians. Meetings followed, usually one but sometimes two daily, exclusively of medical men, at Washington, Ridgway, Beaver Falls, New Castle, Erie, Reynoldsville, Clearfield, Lock Haven, Sunbury, Middleburg, Pen Argyl, Lebanon, Gettysburg, Pottsville, Wilkesbarre, Honesdale, Scranton and closing this arduous but most pleasant and interesting labor at Philadelphia on the evening of May 26, after which similar appointments were filled in each of the counties of Delaware before leaving for the State Society in Maine.

Dr. Stevens had given full publicity to the places and dates, as well as of the scope and purposes of the meetings, and nearly all were well attended. The appointments were so arranged as to make one or more of them easily accessible to the physicians of nearly every county, and as my opening talks were always followed by a full and frank discussion of both the conditions and needs of the profession of each locality represented, with especial reference to scientific attainments, harmony and material prosperity; and as the information thus obtained was constantly supplemented by personal investigation and inquiry before and after the meetings, I was able to get a fair insight into the actual conditions in nearly every county in Pennsylvania, and to institute comparisons in a broad and instructive way between such conditions there and similar conditions in Wisconsin, Missouri, Illinois, South Carolina, Kansas and other recently organized states which had been visited in the same way.

On the whole, this comparison was most favorable to the Pennsylvania profession, but it soon developed that this advantage was confined strictly to the counties where fairly effective local organizations had been maintained. Wherever a few devoted men had stood together year after year, if only for a little scientific work, with good fellowship inseparable from such contact, the good results were noticeable, not only in them, but, to a degree, in those who did not attend or even belong to the societies. In such counties, constituting a majority in the state, the distinct impression was made on me that the tone and attainments of the profession were higher, and that there were fewer lower grade men than in most of the other states. As if to emphasize the value of local organizations, often adjoining such counties would be found others equally wealthy and prosperous in other respects where societies existed only in name, and where the profession was as much demoralized and as low in grade as could be found in any part of the United States. The value of good work on such lines was especially marked in the newer and more sparsely settled mountain counties. Here a larger proportion of the members of the profession were young men, they were better organized as a rule, and impressed one as being more competent and progressive than those found in many old and rich counties in other sections.

In order to attain a proper understanding of these criticisms, and of others to follow, it may be well to state here that in framing the old Pennsylvania plan, it appears to have been the intention that the county societies should be exclusive in their make-up in the best sense, and should confine themselves almost entirely to scientific and to social functions. No comprehensive system for co-operation or assistance from the state society in promoting organization in laggard counties was contemplated, each county being left to work out these matters with the varying degree of success which might have been anticipated. Most of the societies met only at long intervals and little or no effort was usually made to promote or to protect the business interests of members, to influence legislation, to educate or to secure the support of the public along legitimate lines, or to take a directing part in other matters so intimately connected with the well-being of both the profession and country. Membership was discouraged in many counties by the requirement of a year's residence after graduation or removal, or other regulations equally archaic, with the result that often not more than a third or one-half of the eligible physicians were enrolled as members, and in two or three instances it was a question if the best men were not on the outside.

Under such a system it is not surprising that the medical fees were found to be lower in a majority of the counties than in any other state where this matter has been investigated. In Luzerne, Washington and some other counties the societies had taken up this phase of the work systematically and with most satisfactory results, but, as a rule, the profession evidently participates less in the general prosperity of this rich country than any other class of citizens; and, outside of a comparatively small number of leading men, this seemed as true of the cities as of the country districts. In fact, low fees, with rate cutting and the dissensions inseparable from such conditions, were most common in the older and richer counties, unless their organizations were strong. In like manner, and for the same reason evidently, the profession has little influence in securing necessary medical and sanitary legislation. These things here have been considered as beyond the province, or rather as beneath the dignity, of medical men and societies, with results almost disastrous to both the profession and people. Drs. Beates and Stevens, who have both done noble and self-sacrificing labor in these and other fields for years, informed me that even in an emergency it was impossible to secure the co-operation of any considerable number of the physicians in most of the counties. This impressed me with the importance of insisting that county societies everywhere should be kept constantly alive to every interest of the profession, material as well as scientific, public as well as personal.

The need for reform in both business and legislative affairs is certainly urgent in Pennsylvania, and well-devised and comprehensive plans for both should probably originate in the State Society, taking one of the best county societies as a model. Dr. Beates or some other well-equipped and tactful leader, who has the confidence of the profession, should be employed, on an adequate salary, to devote his entire time to organization and legislative work, and should visit, know and be in constant touch with the medical men in each county; and he should know legislators and their affiliations in such a way as to be able to concentrate the influence of their medical constituents on them at any time in support of every proper measure. The sooner the profession can be made to understand that its legislative work is a specialty, requiring the same study and skill as any other specialty, the sooner it will begin to get proper and tangible results. No one is fitted for such work who does not possess great tact in dealing with men, an unfailing good temper, and the truest and highest spirit of altruism.

It was a constant complaint here that young men take little interest in society work, and even when there is no rule to the contrary, it is almost impossible to induce recent graduates to accept membership. This has been found to be the case all over the country, so much so as to raise the question, if the apathy and indifference of the medical schools on the subject do not constitute the most serious obstacles to the complete organization of the profession of this country. The time has come in our history when it is just as essential that the medical graduate shall know how to legitimately obtain practice, how to make a living, how to live at ethical peace with his neighbor, and how and why he owes it as a personal and public duty to co-operate with the organized body of his guild in advancing his own and their common interests, as that he should have careful training in the technical branches. Such a practical course is now given in the University of Michigan, and in a few of the best homeopathic schools, but with these exceptions, after years of agitation of the subject, even our best schools are still asleep in this regard, and almost 5,000 graduates are sent out from them annually, without economic or ethical chart or compass, to make port or shipwreck, as personal character, chance, or accident, may determine. A large per cent. of the profession of this country is in poverty, and the whole of it almost in disgrace in the public estimation, for the lack of such training, and the time is ripe for such united effort to be made as will, at least for the future generations, correct this evil at its source.

For the reasons indicated, it would be easier, to my mind, to secure practically complete and universal organization in Pennsylvania than in any other of the great states. To begin with, it has a great profession, with strong leaders who have its confidence, and the nucleus for an effective society in a majority of the counties, so distributed geographically, that such counties, under a proper system, might easily be made centers for organization in a district. With such a foundation to start with, and under such an organization force as is provided in the councilor system of the Association plan, which is now under advisement in the State Society, and with the county societies converted so far as practicable into combined postgraduate schools, and practical business and social clubs, for the study, protection and advancement of the best interests of every physician and citizen of the jurisdictions, it ought not to be a difficult matter to bring into membership all of the 3,500 medical men now on the outside, and to enlist the support of all of the best elements of the press and the public. It is true that the problems of Philadelphia, and probably of Pittsburg, are complex, but they are certainly not more so than than those which are being worked out in Chicago, Detroit, Cleveland and other large cities, and if Drs. Eaton, Perkins, Hirsch and Anders can have the earnest, active co-operation of the leading teachers and practitioners of Philadelphia, to which they are entitled, and especially if the meetings could be held on a regular evening in each week, and made so attractive as to invite and to encourage attendance from near-by counties in their own and adjoining states, this one society could easily be made a most potent factor in professional affairs in all that section of the Union. The benefits of such a policy, broad, liberal and helpful as they would be to others, would be of incalculable value to the local profession. To do all of these things, and not a single impractical or utopian suggestion is embraced in them, would require a real, practical union of all of the forces at the command of a united profession—the medical schools, first and most important, for the reasons already stated, and then the societies, clubs and individual physicians.

To say that much time and unceasing labor would be required to perfect such an organization in Pennsylvania, and that if undertaken individual members would fail to do their duty, or would obstruct the work, is only to say that the movement is a vast one, in a sadly neglected field in some counties; that the agencies to be relied on are voluntary and finite, and that it is subject to the fortunes and vicissitudes attending all human endeavor. Realizing all these things, the contention is that the results would be well worth all the time, labor and money expended, and much more, and that the work must be undertaken in the broad, catholic, generous spirit indicated, before the profession can be redeemed from self-imposed evils, many of them hoary with age, and come to occupy that place in the public estimation, and as a directing force in public affairs, to which its real worth, learning and usefulness so justly entitle it.

The compensations of the trip, aside from its main purposes, and the pleasant acquaintances renewed or made, were numerous. At Northumberland, nestled in the beautiful valley of the Susquehanna, I stood with uncovered head by the grave of Priestly, and saw his home and the little laboratory where he worked out his discovery of oxygen. In Northampton County I saw the birthplace of Gross. I was in Easton, in the same county, where he located and practiced before he came to Kentucky and caught the inspiration from the work of Brashear, McDowell and Dudley, and from association with Drake, Cooke, Austin and Joshua Flint, the elder Yandell and other colleagues, which his genius and industry transmuted and coined into a successful career there, and which crowned him with a world-wide fame after his return to the larger field later opened up for him in the metropolis of his native state.

This account can not close without an acknowledgment of the kind and generous hospitality extended to me at every appointment. This was so cordial and constant as would make the mention of individual instances invidious, and was tendered in such a way as would make criticisms of any kind seem ungracious, but for the fact that it was invited and expected, and that it is known in advance that it will be received in the same kindly spirit in which it is written.

Society Proceedings

COMING MEETINGS.

American Medical Association, Portland, Ore., July 11-14, 1905.

American Pediatric Society, Lake George, N. Y., June 19-21.
Medical Society of New Jersey, West End, June 20-22.
Indian Territory Medical Association, Tulsa, June 20-22.
Michigan State Medical Society, Petoskey, June 28-30.
American Climatological Association, Detroit, Mich., June 28-29.
American Surgical Association, San Francisco, Cal., July 5-7
South Dakota State Medical Association, Deadwood, July 5-7.
Amer. Assn. of Life Ins. Exam. Surgeons, Portland, Ore., July 10.
American Medical Editors' Assn., Portland, Oreg., July 10.
Oklahoma State Medical Association, Guthrie, July 10-11.
American Urological Association, Portland, Ore., July 12-13.

CALIFORNIA ACADEMY OF MEDICINE.

Regular Meeting, held April 25, 1905.

The President, Dr. Dudley Tait, in the Chair.

Epidermolysis Bullosa Hereditaria.

Dr. Howard Morrow presented a boy, 10 years old, showing the above condition. Whenever he is bruised, a vesicle or bulla develops. These have been most numerous about the feet and legs, and are due to an accumulation of serum between the layers of the epidermis. The boy also has sweating palms and soles. His mother suffered from a similar condition as a child, and another brother has it.

Dr. Montgomery stated that it is important to differentiate this condition from pemphigus, for the former is relatively harmless. The use of belladonna in one of his cases had seemed to control the formation of vesicles.

Autopsy on Case of Leukemia Treated by the X-Ray.

Dr. W. F. Cheney made a final report on the case of leukemia previously reported (see The Journal, Nov. 14, 1904, page 1578). At that time the patient had 60,000 leucocytes. Somewhat later, even while under treatment, he began to run down, and, becoming discouraged, discontinued the treatment. In November he had lobar pneumonia, but his blood picture did not change during this time. He died on March 5, 1905. The autopsy showed the ordinary gross and microscopic changes of leukemia.

DISCUSSION.

Dr. Geo. Evans believed that the treatment had been discontinued too soon in this case, and that it could hardly be cited as one demonstrating the inefficacy of x-ray treatment. His own cases, previously reported, are still under treatment and are doing well.

Dr. A. W. Hewlett stated that he recently had a case of leukemia under treatment with the x-ray. The patient had been treated with arsenic and quinin previously without any apparent benefit. Under x-ray treatment, the leucocytes have fallen from about 350,000 or 400,000 to about 75,000, and the hemoglobin has risen from 48 per cent. to 74 per cent. At present, about three months after treatment, the condition seems to be almost stationary. The spleen has become much smaller, but it is still much enlarged. Treating the spleen seemed to be more effective in reducing the number of leucocytes than was treating the long bones.

Dr. Lehmann prefers to treat leukemia by small doses of the x-ray over a long period of time. Some cases, reported in the literature, have improved remarkably within a short time, but these seem to be the very ones that are most likely to die suddenly. High tension tubes are used.

The Effect of Atropin on a Pulsus Bigeminus.

Dr. A. W. Hewlett demonstrated some tracings taken from a patient who had a pulsus bigeminus. He was given a large dose of atropin. At first the pulse became more rapid, but the interval between the normal beat and the extra systole remained unchanged. Then the pulse became irregular and the extra systoles disappeared. Finally, the heart rate slowed down; but the extra systoles did not reappear, and the pulse has, therefore, become converted from a continual bigeminal pulse into a perfectly regular, apparently normal pulse.

Regular Meeting, held May 23, 1905.

The President, Dr. Dudley Tait, in the Chair.

Bilharzia Disease in Porto Ricans.

Dr. Herbert Gunn reported two cases. This disease is prevalent in some countries, especially Egypt and other parts of Africa. British soldiers, returning from South Africa, have probably disseminated it more or less throughout the British possessions. Hitherto only six cases have been reported in the United States. Of these, four probably were imported. The other two, supposed to have originated in this country, are not examples of bilharzia infection. Manson discovered an infection in a man who had lived in the West Indies, and he believes that this patient must have contracted the disease there. This patient had not been in Porto Rico. No other reference to the occurrence of bilharzia infection in the West Indies could be found in the literature.

Both of the patients whose histories were here reported had come from Porto Rico and had resided for a few months in the Hawaiian Islands. Yet there is no reason to believe that the disease was contracted in the latter place, and it seems much more probable that it was contracted in Porto Rico. Both patients were also infected with *Uncinaria duodenalis*, and the bilharzia eggs were found in their stools accidentally. So far as could be told, they presented no symptoms directly attributable to the latter infection. The eggs found in their stools were quite typical, being about .16 mm. long by .06 mm. wide, and with lateral spines. When bilharzia eggs appear in the urine, they differ from those that appear in the feces, in that the spine is not lateral, but terminal. The cause of this characteristic difference is not known. Possibly there are two varieties of worms. The adult worms are one to two centimeters long and are bisexual. They live in the portal vein or its branches, or more rarely in the veins of other parts of the body. Several hundred worms may be present. The life cycle of the worm outside of the human body has never been worked out, and consequently we are quite ignorant as to the manner of infection. Many believe that it takes place through drinking water or during bathing.

As in these cases just reported, the patient frequently presents no symptoms that are referable to the infection. At other times, malaise, pains in the back, loss of weight and strength, eosinophilia, etc., are present. If the eggs appear in the urine, they may cause hematuria and the symptoms of cystitis. If they appear in the feces, the patient may suffer from dysenteric symptoms.

DISCUSSION.

Dr. Geo. Blumer suggested that the lateral spine assisted the eggs in penetrating the tissues, in that it allowed them to travel in only one direction. The cases that have been reported as originating in the United States were probably not examples of bilharzia infection.

Dr. C. M. Cooper stated that bilharzia disease is very common among the Boers, and much more frequent there among the boys than among the girls. This is supposed to be due to the fact that the boys bathe in streams, etc. Hematuria is so frequent that many of the more ignorant people believe a boy is not healthy unless he passes bloody urine occasionally.

Adhesive Pericarditis.

Dr. C. M. Cooper stated that too much stress must not be laid on the Broadbent sign in the diagnosis of adhesive pericarditis. He has seen this sign a number of times in patients with hypertrophied hearts, as well as in thin patients whose hearts were beating very forcibly. These observations have, in a number of cases, been confirmed at autopsy. The retraction of the intercostal spaces in these cases usually ascends during expiration and descends during inspiration, thus demonstrating that it is due, not to a direct tug of the diaphragm on the chest wall, but to a negative pressure within the chest cavity caused by the contraction of the heart. Cooper has been able, in a number of cases, to demonstrate pericardial adhesions on *x*-ray photographs.

AMERICAN THERAPEUTIC SOCIETY.

Sixth Annual Meeting, held in Philadelphia, May 4-6, 1905.

The President, Dr. **Oliver T. Osborne**, New Haven, Conn., in the Chair.

The address of welcome was delivered by Dr. H. C. Wood, Philadelphia, and the response by Dr. R. W. Wilcox, New York.

The address by the president, Dr. Osborne, was on the subject, "The Therapeutic Art." This was published in The Journal, May 13.

Officers Elected.

President, Dr. Carl Beck, New York City; vice-presidents, Drs. J. M. Hall, Denver, and Robert Reyburn, Washington, D. C.; secretary, Dr. Noble P. Barnes, Washington; recorder, Dr. William M. Sprigg, Washington; treasurer, Dr. John S. McLain, Washington; curator, Dr. George C. Ober, Washington.

The next annual meeting will be held at New York City, May 3-5, 1906.

Among the papers read were the following: "The Effects of Intravenous Injections of Ergot on the Mammalian Circulation," by
Drs. Torald Sollmann, and E. D. Brown, Cleveland, Ohio; "The
Proper Sphere of Bromids in Epilepsy," by Dr. Frederick Peterson,
New York; "The Prevention and Treatment of Uremia in Acute
Nephritis," by Dr. Howard Van Rensselaer, Albany, N. Y.; "The
Management of Chronic Parenchymatous and Chronic Interstitial
Nephritis," by Dr. S. Solis-Cohen, Philadelphia; "The Medical
Treatment of Serous Effusions," by Dr. Thomas L. Coley, Phila-
delphia; "The Treatment of Chronic Nasal Catarrh with Sulphur,"
by Dr. Louis Kolopinski, Washington, D. C.; "The Value of Physio-
logic Salt Solution in Circulatory Failure," by Dr. H. C. Wood,
Jr., Philadelphia; "Clinical Experiences with Certain Drugs in
Heart Disease," by Dr. Thomas E. Satterthwaite, New York City;
"Exhibition of Several Cases of Skin Disease," by Dr. John V.
Shoemaker, Philadelphia; "The Recognition and Treatment of
Cholecystitis," by Dr. Robert T. Morris, New York City; "The
Treatment of Intestinal Indigestion," by Dr. George B. Fowler, New
York; "The Treatment of Chronic Diarrhea," by Dr. Reynold Webb
Wilcox, New York City; "Rectal Alimentation," by Dr. William H.
Porter, New York City; "The Etiology and Treatment of Infantile
Atrophy," by Dr. John Blake White, New York City; "Notes on
the Treatment of Hay Fever and Asthma," by Dr. Charles H.
Knight of New York City; "Drug Adulterations," by Dr. Harvey W.
Wiley of New York City; "The Prophylaxis of Pneumonia," by Dr.
James M. Anders, Philadelphia; "The Recognition and Treatment
of Pancreatic Inflammations," by Dr. Carl Beck, New York; "The
Management of Injuries to the Knee-Joint," by Dr. DeForest Wil-
laid, Philadelphia; "The Treatment of Neuritis," by Dr. Daniel R.
Brower, Chicago; "The Value of the Correction of Errors of Re-
fraction in Psychoses," by Dr. Edward D. Fisher, New York City;
"The Management of Dysmenorrhea," by Dr. Egbert H. Grandin,
New York City; "The Treatment of Incontinence of Urine in Chil-
dren," by Dr. Noble P. Barnes, Washington, D. C.

AMERICAN GYNECOLOGICAL SOCIETY.

Thirtieth Annual Meeting, held at Niagara Falls, May 25-27, 1905.

(*Continued from page 1878.*)

Arteriosclerosis of the Uterus as a Factor in Uterine Hemorrhage.

Dr. Palmer Findley, Chicago, gave a résumé of all cases and reported four new ones. The writer deals exclusively with the so-called essential or idiopathic hemorrhages, the cause of which is not definitely determined. He argues that arteriosclerosis of the uterus is not the prime factor in bringing about these obscure hemorrhages. In his opinion, muscular insufficiency is the underlying cause, and the sclerosed vessels are but contributing factors.

Postoperative Vomiting.

Dr. Eugene Boise, Grand Rapids, Mich., said it is assumed as proof that there is a vomiting center from which all impulses toward vomiting are sent. These impulses may be received through various channels. The conditions that lead to postoperative vomiting are numerous. They may be grouped as (1) those conditions pertaining to the anesthetic; (2) those pertaining to the general condition and surroundings of the patient; (3) and those pertaining to the stomach. The anesthetic causes vomiting (1) by its direct irritant action on the vomiting center; (2) by causing a toxemia, and (3) by saturating the secretions of the stomach. The conditions pertaining to the stomach are chronic, such as atony, dilatation, chronic disease of the mucous membrane, etc. Acute, as saturation of the tissues and secretions of the stomach by the anesthetic. Treatment must, therefore, be preventive as well as curative, involving greater care in the preparation of the patient. Four things should be kept in mind: (1) The abnormal irritability of the vomiting center; (2) the condition of the stomach; (3) the condition of the blood, and (4) the condition of elimination.

DISCUSSION.

Dr. A. Lapthorn Smith emphasized the necessity and importance of preliminary preparation of patients, and advocated the drinking of large quantities of hot water by patients to wash out the ether that has been swallowed during its administration.

Dr. Matthew D. Mann said that for three years he has been using ether, preceding it by chlorid of ethyl. He has done operations, lasting forty-five minutes, with two or three ounces of ether at each operation, when preceded by chlorid of ethyl. Since following this method, vomiting has been greatly reduced, and in many instances the patients have not vomited at all.

Dr. A. Palmer Dudley said that if operators considered the preparatory measures mentioned, there would be less reflex action on the part of the stomach after operation.

Dr. Andrew F. Currier thinks that the preliminary administration of chlorid of ethyl, or nitrous oxid, as has been his custom recently, is much more satisfactory than the prolonged and irritating effects which come from the first stage of anesthesia, through the administration of ether alone.

Dr. C. C. Frederick said that for a year and a half he has commenced anesthesia with chlorid of ethyl, getting the patient under its influence rapidly, then changing to ether or chloroform. Vomiting is much less by this combination.

Dr. Arthur W. Johnstone attributes the great decrease in the amount of vomiting after operations largely to careful preliminary preparation of his patients, and of having the same man give the anesthetic.

Dr. Malcolm McLean, New York, said anesthetics should be given by men who are skilled in this work. By giving a preliminary anesthetic of chlorid of ethyl or nitrous oxid, the preparation of the patient is such that when ether or chloroform is given, large toxic doses of it are not carried through the circulation to poison the patient in the postoperative stage.

DR. GEORGE GELLHORN, St. Louis, has employed as a preliminary the hypodermic injection of scopolamin-morphin about an hour before operation. This combination arrests secretions from the mucous membrane of the mouth and throat. He gives these in the proportions of 1/150 of a grain of scopolamin to 1/6 of a grain of morphin. The amount of ether used is materially minimized by this preliminary.

DR. REUBEN PETERSON said that for years he had used about 1/6 of a grain of morphin and 1/150 of a grain of atropin, about three-quarters of an hour before the anesthetic was given. Before he used these drugs there was excessive secretion, so that the mouth and throat of the patient had to be swabbed out, but since their use this has ceased almost entirely. He has not attributed the absence of vomiting entirely to the use of these drugs, but also to thorough preliminary preparation of the patient, and to better methods of administering chloroform or ether.

DR. EDWARD P. DAVIS said that one is obliged sometimes to operate on emergency cases. In these, postoperative vomiting may be very depressing and dangerous. What can be done to prevent it? While the patient is on the table, and before the operation is quite completed, intravenous saline transfusion or injection will prevent postoperative vomiting as well as shock.

DR. FERNAND HENROTIN said that one of the most important factors in reducing vomiting, as well as shock, and of making a patient's recovery reasonably smooth, is washing out the stomach. For a little over a year, he has been resorting to quick anesthesia with nitrous oxid preparatory to the administration of ether, using as little of the anesthetic as possible, immediately washing out the stomach thoroughly after every operation, and giving a hypodermic injection of eserin before the patient is taken off the table. The use of this combination has made an immense difference in the results of his general operative work.

DR. J. WESLEY BOVEE thinks the proper procedure is to prepare patients as well as the conditions will permit. This should be done with proper discrimination. Then comes the proper administration of the anesthetic, giving as little as possible of it, and steadily, not irregularly. After the administration of the anesthetic he has found the administration of oxygen for a short time to be most satisfactory.

The Relation of the Appendix to Pelvic Disease or to Pregnancy.

DR. REUBEN PETERSON, Ann Arbor, Mich., presented his conclusions based on the clinical and microscopic study of 85 appendices removed during the course of operations for pelvic disease (see abstract in THE JOURNAL, Sept. 10, 1904, page 756).

DR. A. LAPTHORN SMITH, Montreal, said that in many cases of supposed pelvic disease and fever after delivery the appendix is responsible for most of the trouble, although it may not always present gross lesions. Therefore, no woman should be allowed to begin or to continue a pregnancy with an appendix which is known to be chronically inflamed, and all operations for the removal of the appendages should begin by the removal of the vermiform appendix.

DISCUSSION.

DR. SETH C. GORDON said it is his invariable rule, whenever he opens the abdomen for any other purpose, to remove the appendix whether good, bad, or indifferent.

DR. FREDERICK W. SEARS said that one should not be fearful about operating on pregnant women for appendicitis, as his experience has been that they stand the operation better than the non-pregnant. He reported three cases in which he operated on pregnant women for appendicitis.

DR. ANDREW F. CURRIER does not believe that it is good surgery to remove any organ of the body which he is not convinced is diseased. In certain cases in which there is a strong probability of malignant disease, an exception should be made; but the function of the surgeon is to build up rather than to remove.

DR. CLEMENT CLEVELAND looks on the appendix as a useless organ, and when he operates for other intra-abdominal conditions he does not hesitate to remove the appendix. In cases in which the appendix has not been found diseased, but has been removed, there is no history to show that any harm has come to the patients. The effect has been *nil*.

DR. FERNAND HENROTIN said that, so far as clinical observation is concerned, the appendix is not only responsible for inflammatory attacks, but for indigestion, colic, dyspeptic symptoms, and trouble in the abdomen which is never accurately diagnosed. After an operation for its removal, the patients complain less. He removes the appendix in every instance when operating for some other purpose, unless there are contraindications to its removal.

DR. HERMAN J. BOLDT said that a woman, pregnant about the fourth month, had a number of attacks of acute pain in the abdomen. On bimanual examination, under ether, it was impossible to determine anything definite, but because of the extreme pain he opened her abdomen and found an appendix about six inches long, curled on itself, and acutely inflamed. Since its removal the woman has been well.

DR. JAMES F. BALDWIN, Columbus, Ohio, has for the last eight years made it a routine practice to examine the appendix in all cases when operating for other intra-abdominal pathologic conditions. Out of 3,000 abdominal sections, he has removed the appendix 1,800 times.

DR. E. P. DAVIS said there are special reasons why appendicitis should appear in pregnant women, and why the appendix should be removed during pregnancy. The *Bacillus coli communis* is present in abundance in the intestine of every pregnant woman, and any condition of the intestinal tract during pregnancy, which in the slightest degree lessens peristalsis of the normal intestine, predisposes to infection by that organism—infection of the adnexa, the uterus, or the appendix. On the other hand, the pregnant woman whose metabolism is well maintained is in a good condition for a surgical procedure, because she has a physiologic blood plethora. She bears anesthesia well. The removal of the appendix is applicable to pregnant women, and need not be delayed until after delivery, as it is much safer to do the operation during pregnancy than let the woman run the risk.

DR. ARTHUR W. JOHNSTONE said that his experience has been limited to four operations performed on pregnant women for appendicitis between two and a half and four months. All recovered. There were no miscarriages.

DR. MALCOLM MCLEAN would not remove an organ simply because it may in the future give trouble.

DR. ELY VAN DE WARKER sees no reason why, if one observes a perfectly healthy appendix, when operating for some other purpose, it should be removed for fear that it would give trouble in the future. One might as well remove the gall bladder and other organs for fear they might cause trouble in the future.

DR. J. RIDDLE GOFFE does not believe in removing a healthy appendix when operating for some other purpose. The appendix may have some function.

DR. P. A. HARRIS opposes the removal of perfectly healthy appendices unless there is abundant time to remove these organs or unless the patients desire it.

Radical Abdominal Versus Vaginal Operation for Uterine Carcinoma.

DR. C. C. FREDERICK, Buffalo, N. Y., drew the following conclusions: 1. The radical operation for carcinoma of the uterus should be done only when the gross lesions are confined to the uterine tissues. 2. The deeper tissues of the cervix are generally invaded first, and also the deeper layers of the vagina in the immediate vicinity of the cervix are infected before the disease appears on the mucous surface. 3. The bladder wall is very early infected, especially when the anterior lip of the cervix is the starting point of the growth. 4. When pain becomes a prominent symptom, the growth has passed beyond the uterine tissue. Such an involvement is a positive contraindication to a radical operation. 5. In carcinoma of the body of the uterus the liability of extrauterine lymphatic infection is less for the same period of growth. 6. When the radical operation is done, it is necessary to remove as much of the vaginal wall and pericervical tissues and broad ligaments as possible. 7. It is a well attested fact that in most recurrences after hysterectomy the growth is found in the cicatrix and the adjacent vaginal tissues. 8. Removal of the pelvic lymphatics and glands does not insure against recurrence. 9. If the vagina is ordinarily capacious, and if the uterus can be drawn down, it would seem that the vaginal route is naturally the one by which the operation can be most readily and thoroughly done. 10. Recurrence due to infection of the freshly incised tissues at the time of operation by contact of the carcinomatous mass or its fluids may, to a degree, be prevented by the vaginal removal of the cancerous mass, or by thoroughly cauterizing it before beginning the operation proper. 11. The operation can be more quickly done than by the abdominal route. 12. Convalescence after vaginal operations is much more rapid, there is much less pain, and there is much less shock to the nervous system. 13. For the cervical carcinoma, in most instances the combined clamp and cautery operation seems to be the preferable one. 14. Infected areas are reached and rendered harmless by the free use of the cautery in this operation. 15. All tissues should be seared by it, except those at the utero-vesical junction. The writer limits the abdominal operation to those patients in whom the condition of the vagina or immobility of the uterus makes the vaginal operation practically impossible.

Paravaginal or Abdominal Operation in Uterine Carcinoma.

Dr. George Gellhorn, St. Louis, presented the following conclusions: 1. The radical abdominal operation, so far as the routine ablation of the lymphatic organs of the pelvis is concerned, has thus far failed to yield the desired results. On the other hand, the eradication of the parametria has been found to reduce greatly the percentage of cures. 2. The simple abdominal and vaginal operations which do not include this procedure should be discarded. 3. For the extirpation of the parametria, Wertheim's method is the best of the abdominal operations. It has, however, certain disadvantages as compared with the paravaginal method of Schuchardt. 4. Considering the encouraging results of igni-extirpation, a combination of thermocautery with paravaginal extirpation, gives promise of further improvement in operative results.

Incontinence of Urine in Women.

The president's address by Dr. E. C. Dudley, Chicago, was published in full, with illustrations, in The Journal, June 3, 1905, page 1738.

Mortality in Operations for Uterine Fibroid.

Dr. J. Montgomery Baldy, Philadelphia, said that degenerations of fibroid uterus, except malignant and necrotic, are of more scientific interest than practical value. The greatest dangers of fibroids lie in the large death rate following operations due to heart degeneration, arterial changes, lung thrombosis, etc. He pointed out the condition inherent in all fibroid tumors of the uterus, and said the tumor should be removed at a period early enough to anticipate the changes.

Migratory Uterine Fibroids.

Dr. Reuben Peterson, Ann Arbor, Mich., reported cases showing the different stages of the separation of uterine growths from the uterus and their attachments to other abdominal organs. The causes and results of such migration were studied in the light of the literature of the subject and the personal experience of the author. Case 1 was an irregularly-shaped subperitoneal fibroid the size of a fist, attached to the uterus by a very slender pedicle. The latter was very friable and broke away from the uterus during the removal of the latter. The omentum was attached to the posterior surface of the fibroid and partially nourished it. Case 2 was one of subperitoneal uterine fibroid, the size and shape of a normal kidney, connected with the uterus by a narrow pedicle, twisted once on itself. The tumor was situated on the right uterine horn, although the pedicle came from the other horn. The tumor was also attached to the bladder, pelvic peritoneum, omentum and appendix. Case 3 was a hard, smooth tumor the size of an orange, unattached to the uterus, having all the characteristics of a subperitoneal fibroid, surrounded on all sides by the omentum and nourished entirely by the omental blood vessels.

Surgical Treatment of Gastric Ulcer.

Dr. William H. Wathen, Louisville, contributed a paper on this subject, which will be published in The Journal.

Symposium on the Toxemias of Pregnancy.

CLINICAL TYPES OF PREGNANCY TOXEMIA.

Dr. J. Clifton Edgar, New York, considered the benign type, subacute type, acute type, fulminant type, toxemic coma without convulsions, acid toxemia simulating hepatic pregnancy toxemia, persistent hyperemesis without clinical symptoms of toxemia, etc. Cases illustrating each type of toxemia were reported.

RENAL INSUFFICIENCY.

Dr. Henry C. Coe, New York, said that this referred not only to *diminished* amount of urine, but to deficient excretion of urea, with or without accompanying albumin and casts. The importance of this subject can not be overestimated on account of its direct bearing on the prevention of eclampsia. He mentioned the erroneous views formerly held that eclampsia always comes suddenly, without warning. Now it is known that danger signals are seldom absent long before the attack, if careful watch is kept over the urine. Diminished urea, not the presence of albumin, is the important point. There are two channels for the excretion of toxins, the kidneys and intestines. The kidneys and bowels should be flushed and the diet regulated all through pregnancy. One should know the daily amount of urine at frequent intervals and the amount of urea. He should not wait for general evidences of toxemia, gastric disturbances, pruritus, headache, etc., but anticipate them. Illustrative cases were cited.

Pernicious Vomiting of Pregnancy.

Dr. J. Whitridge Williams, Baltimore, after pointing out the distinction between vomiting of and vomiting in pregnancy, divided the former into three groups, and discussed their nature, etiology and treatment, namely, reflex, neurotic, and toxemic. The reflex vomiting of pregnancy may be due to the presence of abnormalities of the generative tract or ovum, which exist prior to the onset of pregnancy, or are coincident with it. Among such conditions may be mentioned retrodisplacements of the uterus, ovarian tumors, certain forms of endometritis, and abnormalities of the ovum, such as hydatidiform mole, hydramnios, and certain cases of twin pregnancy. The observations of the author and others show that typical lesions may be found at autopsy in certain cases, and these consist in the necrosis of the central portions of the liver lobules, and fatty degeneration and necrosis of the secretory cells of the kidney. Such changes can be produced only by the circulation in the blood of some toxic substance which acts destructively on the cells in question. The occasional occurrence of jaundice in some cases adds confirmation to the existence of an hepatic lesion; while the not infrequent association of peripheral neuritis with the vomiting accentuates the probability of its toxemic origin. The liver lesions are identical with those observed in acute yellow atrophy of the liver and icterus gravis, though in most of the cases of vomiting no marked diminution in the size of the liver has been noted. As the former affections occur usually in the second half of pregnancy, and the vomiting in the first half, it seems probable that the effect of the toxemia varies somewhat with the duration of the pregnancy. At present, we are unacquainted with the exact nature of the toxic substances, though they are supposed to be *metabolic* in origin, but whether derived from the mother or fetus, or both, is not known. All that is definitely settled at present is that we have to deal with a toxemia which gives rise to serious lesions in the liver, and later in the kidneys. That the latter are secondary in character is indicated by the fact that the urine does not contain albumin or casts until shortly before death. Associated with these lesions is a striking change in metabolism, manifested by a marked increase in the percentage of the total nitrogen of the urine, put out as ammonia, which, instead of being 2 to 5 per cent., as normal, may rise to 16, 32, or even 46 per cent. Whether the increased ammonia output is due to the fact that the liver lesions interfere with the normal oxidation of nitrogenous material, so that large amounts escape conversion into urea, and are therefore excreted in a less highly oxidized form, as ammonia, or whether it represents an attempt to neutralize an acid intoxication, is as yet undetermined. The practical point established is that a marked increase in the percentage of the urinary nitrogen excreted as ammonia indicates the existence of a serious toxemia, which, if allowed to continue, will bring about lesions in the liver and other organs inconsistent with life, and, accordingly, abortion should be induced as the only hope of saving the patient. It is probable that an ammonia output of ten per cent. represents the danger signal, and as soon as it is reached, immediate interference is demanded.

In the reflex and neurotic forms of vomiting, the ammonia output remains normal, and, accordingly, in such cases the treatment should consist in correcting genital lesions, if present, and the employment of mental suggestion and rest cure. There are at least two forms of toxemia of pregnancy, one giving rise to pernicious vomiting, and acute yellow atrophy, and the other to eclampsia.

Eclampsia and Its Treatment.

Dr. Cyrus A. Kirkley, Toledo, Ohio, said that other toxins than urea may produce eclampsia. Mixed infection is most probable. Renal insufficiency rather than albuminuria is an etiologic factor. Although the source of the toxins is unknown, recent research rather points to functional disease of the liver. Prophylactic treatment, as a rule, is successful, and this consists of means to promote elimination through the great emunctories. Venesection in suitable cases, both as a prophylactic and curative measure, stands first in the list of remedies.

Dr. Franklin S. Newell, Boston, in a paper on the same subject, said that the treatment, to be efficient, should have four distinct objects in view: (1) the prevention of further absorption of toxins by the removal of the cause; (2) limitation of damage by the toxins already in the system; (3) elimination of the toxins, and (4) treatment of the patient. For some days after the acute process has subsided, the patient should be kept on a liquid diet. Absolute quiet and freedom from care are imperative, and free excretion should be maintained. Sedatives and stimulants should be used as indicated.

Vaginal Cesarean Section, Indications, Advantages and Technic.

Dr. Henry D. Fry, Washington, D. C., said the indications for the employment of this operation are, necessity for emptying the uterus in cases of grave eclampsia, cancer of the uterus, rigidity of the os, threatened rupture of the uterus, prolapse of the funis, placenta prævia, heart disease in the pregnant woman, and hemorrhage from the normally implanted placenta. Fry entertains grave doubts regarding the application of this operation or any other method of rapid dilatation to the treatment of placenta prævia. The reduced maternal mortality from this serious complication is largely due to recognizing the value of slow dilatation. He sums up the various indications for this new operation. The advantages of vaginal Cesarean section are the rapidity with which the uterus can be emptied. From six to ten minutes is all the time that operators have reported necessary, and as they become more familiar with the technic, it may be further reduced. Few operators have done more than one or two operations. Twenty to thirty minutes should complete the sewing up of the wound. There is little traumatism, and a clean surgical cut to sew up instead of leaving a lacerated surface. In eclampsia, the blood resulting from the operation is beneficial, and the patient is returned to bed in the best condition to overcome toxemia.

Mortality of Operations, Other Than Strumectomy, in Exophthalmic Goiter.

Dr. Barton C. Hirst, Philadelphia, said that to learn the collective experience of American surgeons with exophthalmic goiter complicating operations, 366 letters were despatched to the members of the national societies of surgery and gynecology. Forty-three surgeons reported 69 cases. This number added to the six collected and reported by Sanderson, makes a total of 75. Of this number, 13 died. In all of these fatal cases the cause of death is expressly stated to be acute thyroidism, with tachycardia to an extreme degree, and eventual heart failure. In one case of appendiceal abscess, the patient died of the combined effects of sepsis and thyroidism. In another case of pelvic abscess, the patient died under chloroform before the operation was begun. Excluding these two cases, the mortality from thyroidism was 14.6 per cent., or including them, 17.3 per cent. The character of the operation seems to have made little difference in the results. The mortality of the minor operations was 16 per cent.; that of the hysterectomies and myomectomies, 13.3 per cent. It appears, therefore, that the existence of exophthalmic goiter adds about 15 per cent. to the mortality of any operation performed on the patient. In the first of the author's patients there has been a distinct goiter and exophthalmos for years, but the tachycardia was moderate. The symptoms in this case were never very alarming, and soon yielded to treatment. It was not known that the second patient had Graves' disease until two days after the operation, when the pulse rose to 180; the eyes protruded, and the throat swelled. He then learned that since girlhood the woman had been subject to such attacks, but lately has been free from them. Although some improvement was shown after hypodermoclysis, purgation and heart stimulants, on the first day that symptoms appeared, a rapid and complete recovery was secured in the next three or four days, apparently in consequence of the administration of suprarenal extract in three grain doses every four hours.

Sudden Death During or Immediately After the Termination of Pregnancy or Operation on Pelvic Organs.

Dr. Edward P. Davis, Philadelphia, reported three instructive cases, and presented a table of 25 typical cases, selected from 193 papers on the subject consulted, and drew the following conclusions:

1. Sudden death may occur after abortion, labor or operation, from undemonstrable causes.

2. Death may follow abortion, labor or operation from the rapid formation of a pulmonary embolus. Examination of cases shows that this happens after so many different procedures that it is impossible to designate any one operation or manipulation which produces it. Pulmonary embolism may develop before the placenta has been delivered, or when delivered by Credé's method; although it is impossible to select any one manipulation which produces this accident. It is not frequent after Cesarean section, nor after the more complicated obstetric operations. Predisposing and probably exciting causes are bronchial infection and abnormal conditions of the blood. In 18,800 women in childbirth or having operation, 30 cases of immediate pulmonary embolism occurred, with a mortality of 73 1-3 per cent. Diagnosis: Respiratory spasm, with continued heart action. Treatment: Hypodermatic stimulation and electric current; intravenous saline transfusion has not proved efficient.

3. Primary thrombosis and secondary embolism may cause death after the termination of pregnancy or operation. Causes: Pre-existing infection, mechanical violence, altered conditions of blood serum, and lesions in the walls of the vessels. The most important symptom is Mehler's sign—rapid pulse. The temperature curve in these patients falls on the third or fourth day, while the pulse curve rises. Death usually occurs from secondary formation of pulmonary embolus. Treatment consists in absolute rest, bandaging of extremities, and in some cases abdominal section with ligation and excision of the veins of the broad ligament. Pulmonary complications develop in 25 per cent. of the cases. Thrombosis is most common in vessels connected with the left iliac vein. There is no conclusive evidence that the entrance of air into the veins is a sufficient cause for death. Gas may form in the vessels from infection.

4. Sudden death occurs in parturient women, and after operation, from reflex nervous shock, without assignable cause; also from disease of the thoracic viscera, from infec-

tion of the placental site, and other obscure conditions. Patients having fibroid tumors are especially liable to disease of the heart and vessels.

Present Therapeutic Status of Electricity in Gynecology.

Dr. Chauncey D. Palmer, Cincinnati, spoke of the importance of this agent in a certain class of cases, and referred to its evolution. He said the possibilities of electricity as a therapeutic agent are by no means limited, and the object of his paper is an effort to speak of electricity and place it on its proper basis, not to magnify or misrepresent its virtues, nor to depreciate its powers.

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

Some Uses of Ammonium Chlorid.

In the treatment of neuralgia of the fifth nerve, Shoemaker recommends the following combination containing ammonium chlorid:

℞. Ammon. chloridi	gr. xxx	2	
Tinct. gelsemii	m. viiss		50
Tinct. aconiti	m. i		06
Ext. glycyrrhizæ flu	ʒi	4	
Aquæ q. s. ad	℥i	30	

M. Sig.: To be taken at one dose, and repeated every hour, when the pain comes on, until three doses are taken.

In the first stage of bronchitis, when there is a deficient secretion, he recommends it combined as follows:

℞. Ammon. chloridi	ʒii	8	
Potass. iodidi	gr. xv	1	
Tinct. ipecacuanhæ	m. xxx	2	
Mist. glycyrrhizæ co. q. s. ad	℥iv	120	

M. Sig.: One tablespoonful every four hours.

Ammonium chlorid is also recommended by some authorities as a hepatic stimulant as follows:

℞. Ammon. chloridi	ʒiii	12	
Sodii chloridi	ʒi	4	
Ext. taraxaci flu	℥ii	60	
Decoct. aloes co. q. s. ad	℥viii	240	

M. Sig.: From one dessertspoonful to a tablespoonful in water three or four times a day.

According to Ringer, ammonium chlorid increases the flow of bile and, therefore, is of service in torpor of the liver, sick headache, biliousness and jaundice due to obstruction of gall ducts. In laryngitis and in chronic bronchitis, when the secretion is tough, it may be used in an inhaler, or internally as follows:

℞. Ammon. chloridi	gr. v		30
Vini ipecacuanhæ	m. v		30
Syr. tolutani	ʒss	2	
Mist. ammoniaci (B. P.)	ʒii	8	
Aq. anisi q. s. ad	℥i	30	

M. Sig.: At one dose and repeated three times a day.

[Mistura ammoniaci is composed of: Ammoniac, 5 parts; syrup of tolu, 10; aqua destil., 150.]

In the treatment of the different forms of neuralgia, Beasley recommends the following combinations containing ammonium chlorid:

℞. Ammonii chloridi	gr. x		65
Tinct. gelsemii	m. x		65
Tinct. aconiti	m. ii		12
Ext. kolæ liq.			
Ext. glycyrrhizæ, flu. āā	ʒss	2	
Aq. chloroformi q. s. ad	℥i	30	

M. Sig.: At one dose and repeat every four hours. Or:

℞. Ammonii chloridi	gr. xv	1	
Tinct. ammon. valer	m. xv	1	
Tinct. belladonnæ	m. x		65
Tinct. ignatiæ	m. v		30
Syr. arom.	ʒi	4	
Aquæ destil. q. s. ad	℥i	30	

M. Sig.: One to two tablespoonsful to be taken in water every four hours for three doses.

In cirrhosis of the liver he recommends the following combination:

℞. Ammonii chloridi	gr. xii		75
Ext. taraxici liq.	ʒi	4	
Tinct. gent. co.			
Syr. aurantii, āā	ʒss	2	
Infus. sennæ co. q. s. ad	℥i	30	

M. Sig.: To be taken at one dose in water and repeated once daily.

When there is congestion of the respiratory mucous membranes or of the pleura the following is advised:

℞. Ammonii chloridi	gr. x		65
Vini antimonialis	m. vi		40
Ext. glycyrrhizæ liq	ʒss	2	
Aq. anisi q. s. ad	℥ss	15	

M. Sig.: At one dose in water and repeated every four hours.

In cases of orchitis the following is recommended:

℞. Ammonii chloridi	ʒi	4	
Spts. rectif.	℥i	30	
Aquæ destil. q. s. ad	℥vi	180	

M. Fiat lotio. Sig.: Lint to be saturated with this solution and applied to the painful parts.

Sponging of Fever Patients.

The following method of procedure in sponging a patient is recommended by the *Hospital:* Before commencing the sponge the temperature of the patient must be taken. For tepid sponging, water should be prepared at a temperature of from 80 to 90 degrees F. Remove all the clothing from the patient and place him between blankets. All basins, sponges and towels must be arranged beside the bed, as the patient should never be left during the course of sponging. Commence at the head and proceed downward, exposing only one limb at a time. When the entire body has been gone over the patient should be wrapped in a warm blanket and left undisturbed for an hour. The temperature should then be taken in order to ascertain whether or not any reduction has taken place. The same routine should be carried out in cold sponging as in tepid sponging. It is better, so it is stated, to sponge the limb over first in tepid water before applying the cold, as it will then cause less shock to the patient. A hot-water bottle should be kept in touch with the patient's feet during the sponge, in order to prevent a chill or collapse. When the temperature has been reduced, the body should be dried and a flannel gown put on. Ammonia, cologne water or vinegar added to the water makes it more cooling by its rapid evaporation.

Hyperidrosis.

The following combinations after Unna are recommended in the treatment of hyperidrosis: Wash the affected parts with spirits of camphor and apply the following:

℞. Ichthyol.			
Spts. terebinthinæ, āā	ʒii	8	
Ung. zinci oxidi	ʒiv	15	

M. Fiat unguentum. Sig.: Apply locally.

In the shoes the following may be sprinkled:

℞. Sinapis	ʒi	4	
Pulv. talci	℥iv	120	

M. Sig.: To be dusted in the shoes and hose.

The Itching of Psoriasis.

The following combination is recommended by *Med. Rev. of Reviews* in the treatment of the itching which may occur in psoriasis:

℞. Chloralis hydratis	ʒss	2	
Pulv. camphoræ	gr. xx	1	30
Acidi carbol	m. xlv	3	
Sulphuris sublim	ʒi	4	
Ung. aq. rosæ	℥i	30	

M. Fiat unguentum. Sig.: Apply locally two or three times daily to the affected areas.

Gout.

The following combinations are recommended by *Le Prog. Med.* in the treatment of gout:

R.	Lithii iodidi	gr. iv		25
	Ext. gentianæ			
	Pulv. gentianæ, āā	gr. i		06

M. Fiat cap. No. i. Sig.: One such capsule three or four times a day.

Acne.

In the treatment of acne occurring in young individuals, Shoemaker recommends the following outline of treatment:

R.	Ferri pyrophos	gr. i		06
	Calcii sulphidi	gr. ss		03
	Strych. sulphatis	gr. 1/80		008
	Quin. sulph	gr. i		06

M. Fiat cap. No. i. Sig.: One such capsule three times daily.

Locally the following should be applied:

R.	Ung. hydrarg. nitratis	ʒi	4	
	Lanolini	℥ss	15	
	Camphoræ	gr. xx	1	30
	Beta-naphthol	gr. xv	1	
	Ung. zinci oxidi benzoatis	℥ss	15	

M. Fiat unguentum. Sig.: Apply locally night and morning.

Scabies.

The following outline of treatment has been recommended by M. Hodara in the treatment of scabies:

R.	Olei olivæ		
	Adipis, āā	ʒv	20
	Sulphuris		
	Beta-naphthol, āā	ʒi	4
	Balsami peruv.	ʒss	2
	Cretæ prep	ʒi	4

M. Fiat unguentum. Sig.: To be thoroughly applied over the affected areas at night.

In the treatment of young children the foregoing may be diluted by adding an equal quantity of olive oil. When impetigo or severe eczematous conditions accompany the scabies the following is recommended:

R.	Liq. petrolati		
	Glycerini, āā	ʒii	8
	Lanolini	ʒvii	28
	Sulphuris	ʒii	8
	Zinci oxidi	ʒv	20
	Menthol	gr. ii	12

M. Fiat unguentum. Sig.: Apply locally to the affected areas.

Pertussis.

H. J. Ring, in *Calif. State Med. Jour.*, states that the fluid extract of castanea has formed the basis of his treatment of pertussis for several years past. He has found that it acts more promptly if combined with belladonna and hyoscyamus. When there are indications of brain complications he combines it with small doses of fluid extract of ergot. One advantage of this preparation is that when combined with simple syrup all children take it readily, as it is not unpleasant, and it is a harmless remedy when given in medicinal doses however long it may be continued. It may be given in from 15 to 20 *minim* doses (1.-1.30) at any age over 2 years, and repeated every two hours. The following combination is recommended by him:

R.	Ext. castaneæ flu (chestnut)	℥i	30	
	Ext. belladonnæ flu	gtt. iv		25
	Ext. hyoscyami flu. (according to age)	m. x-ʒi		65-4.
	Syr. simplicis q. s. ad	℥iv	120	

M. Sig.: One teaspoonful every two hours.

Any local application desired may be used in connection with this treatment, but care must be observed in obtaining a reliable preparation of castanea.

The preparation made from the fresh root of *Cochlearia armoracia* (horse-radish root) is recommended by French authorities as of value in the treatment of whooping cough. It may be combined with an infusion of coffee as follows:

R.	Spts. armoraciæ co. (B. P.)	ʒii	8
	Infusi coffeæ q. s. ad	℥iv	120

M. *Sig.*: One *tablespoonful* every four hours.

Four or five drops of the wine of ipecac may be added to the foregoing combination if desirable.

Medicolegal

Not Liable for Insanitary Prison.—A municipal corporation, the Supreme Court of Appeals of West Virginia holds, in the case of Shaw vs. City of Charleston, is *not* liable for injuries to a person occasioned by the insanitary condition of its prison while he is confined therein for violation of a city ordinance. The explanation given is that the maintenance of a prison is the exercise of a purely governmental power, and that therefore a municipal corporation is not liable for injuries caused by negligence or omission of duty on the part of its officers and agents respecting its prison or persons confined therein.

Relation of Second Miscarriage to Accident.—The Supreme Court of Texas says that in Rapid Transit Railway Co. vs. Smith, an action brought by the latter to recover damages for personal injuries to his wife, there was testimony to show that the wife shortly after the accident had a miscarriage, and later another. The jury were instructed that, if they found that the second miscarriage was the result of the original injury, they should consider it in assessing the damages, otherwise not. The Supreme Court thinks it would have been better to have instructed the jury as to the purpose for which it was to be considered, namely, in determining the extent of such injury, and not for the purpose of allowing specific damages for that miscarriage itself.

May Charge for Liquors Properly Administered.—The Kansas statute provides that a physician lawfully and regularly engaged in the practice of his profession, if he shall deem it necessary to the health of a patient, may administer intoxicating liquors to the patient. It follows, therefore, the Supreme Court of Kansas holds, in the case of State vs. Wilson, that in the absence of any statutory inhibition he may charge and receive pay therefor. The following definition was given: "The legal definition of the word 'administer' is to give, supply, or dispense." It was contended that the word "furnish" should have been added. But the court holds that it was not necessary to use all the synonyms of the word in order to convey to the jury a correct definition of it.

Can Not Compel Re-exhibition of Person.—The Court of Civil Appeals of Texas holds, Houston & Texas Central Railroad Co. vs. Anglin, an action brought to recover damages for personal injuries to the minor son of the latter party, that there was no errror in the refusal of the trial court to require the boy to exhibit his chest to a physician, so as to permit the latter to examine the same, although it appeared that the physician had previously examined him, and that, while testifying in his own behalf, the boy had removed part of his clothing and exhibited to the jury a depression in the lower part of his chest, claimed to have been caused by a crushing of the same at the time of the alleged accident. The Court of Civil Appeals says that, whatever may be the rule in other jurisdictions, it regards it as well settled in that state that a court has no authority to compel a party to exhibit his person to a physician, or any other person, for the purpose of examination; and the fact that he has done so once does not deprive him of the right to refuse to do so again.

Powers of Superintendent of Health.—The Supreme Court of North Carolina says, in the case of Copple vs. Commissioners of Davie County, that it is of the opinion that the county superintendent of health has no right to delegate the performance of his official duties to others—certainly not so as to give his employes the right to make their services a county charge. The office of superintendent of health is one of trust and responsibility. Such superintendent is paid a salary pursuant to the statute at that time fixed by the board of commissioners, and they have the right to expect and require that he will perform the duties for which he is paid. In this case an insolvent person had the smallpox. To prevent the spread of the disease, in the judgment of the superintendent of health, the officer who was given control of the matter, it was necessary to remove and isolate the patient. This was done by removing him to a pesthouse belonging to certain mills. The plaintiff, a physician, took the patient to the pesthouse, took his meals to him three times a day, and attended to him continually during his sickness, when no one else could be found to do it, at the request and by the direction of the superintendent of health. This, the court says, was no delegation of that officer's duties. The superintendent did attend the patient. He was performing the duties imposed on him by statute, and this was a case where the employment of help was necessarily contemplated and authorized. It could not be suggested for a moment that the power of the superintendent was exhausted when he had the patient removed, and that the statute contemplated that he was to be left without food or attendance. There was no abdication of his office by the superintendent. On the contrary, in providing for the care and attendance that officer was carrying out his duty as prompted by every instinct of humanity, and sanctioned by the express provision of a wise and merciful law. If the county pesthouse had been properly equipped and ready, and nurses and sustenance provided, the county commissioners might have reasonably required that patients of this character should be removed into the public pesthouse, provided the quarantine could be made effective that way. The county pesthouse was not ready, and the court holds that, under the statute, and on the facts of the case, the superintendent of health had the power to direct this removal and provide for the maintenance of the patient, to the amount of its reasonable worth.

When May Court Compel Examination Board to Issue License.—The Supreme Court of Washington says, in State vs. Board of Dental Examiners of the State of Washington, that it seems to it that the confusion that arises in the discussion of the question of the right of the courts to interfere with the discretion of an examining board arises more from the inaccurate terms which are used by the law writers than from any inherent difficulty in the law itself. The general rule is well established that the courts can not review the discretion which has by law been vested exclusively in inferior tribunals, and mandamus will therefore not lie to compel the performance of acts or duties which necessarily call for the exercise of discretion on the part of the officer or board at whose hands their performance is required, because the state has, as in this instance, specified the officers on whose judgment on the questions submitted to them the state is willing to rely. Taking the case at bar (where a mandamus was sought) for an example, if a record of the examination had been produced in court, with the questions, answers, and credits given to each question, who would determine whether or not a particular answer had received a sufficient credit? Certainly not the jury, for they are not presumably competent to pass a proper judgment on such subjects. Not the judge, for his qualifications do not embrace, or at least require, an expert knowledge of the science of dentistry. Expert witnesses could not be properly permitted to testify for the reason that the state has already designated and empowered experts to pass on these questions, presumably by reason of their recognized qualifications. But, notwithstanding this, it is equally well established that courts will compel by mandamus the honest performance of official duty, and if, under pretense of exercising discretion, the power is exercised with manifest injustice, or is grossly abused, or duty is avoided, the courts will grant relief. The action of the court must in reality be based on the assumption that the inferior tribunal has refused to exercise the discretion with which it is clothed, because, if it acts arbitrarily or fraudulently, or through unworthy or selfish motives, or conspires against the rights of individuals, under the law, and therefore against the law itself. it has not strictly, as is frequently said, "abused its discretion"—a term which is responsible for some confusion of ideas on this subject—but, in contemplation of law it has not exercised its discretion at all, but has sought to substitute arbitrary and fraudulent disposition and determination of the question submitted for the honest discretion demanded by the law. In such cases the law will by mandamus compel the tribunal to act honestly and fairly, or, in other words, to exercise its discretion; and, when this distinction is kept in mind, the seeming difficulties which have surrounded this question, and which have caused so much discussion, disappear.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

June 3.

1 *Inflammatory Diseases of the Uterine Adnexa and Its Treatment. H. Grad, New York.
2 *Ophthalmic Suggestions. R. Kalish, New York.
3 *Heart and Circulation in the Prognosis and Management of Pulmonary Tuberculosis. S. von Ruck, Asheville, N. C.
4 *Relation of Ethmoidal Inflammation to Asthma. H. Coggeshall, New York.
5 *Difficult Diagnosis in a Case of Abdominal Pregnancy. W. S. Langfitt, Pittsburg, Pa.
6 Case of Heroin Habit. C. E. Atwood, New York.
7 Cactus Grandiflorus. F. Ellingwood, Chicago.

1. **Inflammatory Disease of the Uterine Adnexa.**—Grad considers the anatomy of the adnexa, the etiology of inflammatory processes in this region, their pathology and their relation to pelvic abscess and peritonitis, the clinical history of acute and chronic salpingitis and of ectopic pregnancy. The author believes that the use of palliative methods is very important, as the natural termination of these lesions is in resolution and cure. Procrastination in operative measures and judicious persistence in general treatment is to be strongly urged. The use of opiates requires especial care in order not to mask the symptoms and yet not to permit the patient to suffer needlessly. Local treatment may or may not be necessary, and antiseptic applications and irrigations with liberation of pus and absolute cleanliness are the essentials in the treatment of the various lesions of the urethra, vulva, vagina and cervix. Grad calls attention to the danger attempting radical operation during the acute exacerbations, which he terms a questionable procedure. Vaginal drainage will usually bring about a cessation of symptoms with improvement in the patient's condition. The technic of pelvic operations is treated at length, special stress being laid on the matter of conservative measures and their advisability, when possible. Vaginal section by a T-shaped incision is commended for use in suitable cases.

2. **Some Ophthalmic Suggestions.**—In regard to diseases of the eye, Kalish points out some popular fallacies which, he says, are often the cause of serious injury to the visual power. Among these is the senseless outcry against the wearing of glasses by the young, the belief that squint in young children should go untreated, as they will outgrow it, and especially what the author terms the self-fitting of glasses in the establishments of opticians. The victims in these places are allowed themselves to select the glasses that seem to "fit," and 20 per cent. of such eyes are accurately corrected as to the refractive error, and sooner or later it is discovered that serious damage has been done. Much emphasis is laid by the author on the broad rule that glasses should never be ordered without an ophthalmoscopic examination. Instances are cited in which the glasses obtained from opticians were wholly unsuitable and did positive harm.

3. **Heart and Circulation in Prognosis and Management of Pulmonary Tuberculosis.**—von Ruck says that the relation of the heart and circulation to the course of chronic pulmonary tuberculosis is a factor both in the prognosis and management of such cases which is not generally accorded the attention and study which its importance demands. He suggests the analogy between the relation of the heart and circulation to the local disease in acute pneumonia and in chronic pulmonary tuberculosis. According to his conception, this relation differs chiefly in that the pulmonary obstruction develops rapidly in the one and more slowly in the other. By reason of this difference, more can be done to conserve or to increase the power of the heart in phthisis than in acute pneumonia. It follows that close observation of the circulation in the course of phthisis is imperative, and that a weak second pulmonic sound is to be regarded as a danger signal, just as in acute pneumonia. Overexercise is considered by von Ruck as a potent factor in the production of tachycardia in consumptives, and he cites statistics from the Winyah Sanitarium showing that of 60 patients with disturbed heart action, in 58 per cent. overexercise had been a contributing factor in its

causation. For the entire number of 261 patients, the figures show 72.9 per cent., whereas for those with tachycardia the figures show only 34.1 per cent. The restriction of exercise for consumptives with weak hearts is strongly urged, and the physical management of such patients, together with the regulation of the diet, bathing, etc., is described in detail.

4. **Relation of Ethmoidal Inflammation to Asthma.**—Coggeshall says that asthma is a name given to paroxysmal difficult breathing, and that the disease is an inflammation of the mucous membrane of the ethmoidal cells. An irritation of branches of the trigeminus or olfactory nerves causes an altered activity in the medulla; that is to say, in the center of respiration. The result in the bronchial tubes is a vasomotor disturbance or a contraction of muscles, or both. Chronic bronchitis, or emphysema, or a dilated right side of the heart, are not asthma. They are sequels to asthma of severity and long standing. Other varied factors are the contributory causes of asthma. Errors of nutrition, errors of diet, gout, obesity, lymphatism, impure air and poor circulation are such causes. To these may be added direct irritants to the nasal mucous membrane, such as various pollens, emanations from animals, dust, smoke, and many others in the cases of the sufferers from periodic asthma. Coggeshall outlines a plan of treatment directed toward the correction of the chronic inflammation in the ethmoidal cells.

5. **Difficult Diagnosis in Case of Abdominal Pregnancy.**—Langfitt's patient came under observation a month after a missed labor. She had a temperature of 101 F. and other signs of infection. On opening the abdomen, the uterus was found to be very slightly enlarged and displaced by a large mass occupying the pelvic cavity and attached to the right Fallopian tube. The fetus, which was dead and disorganizing, weighed six pounds. The removal of the mass was successfully accomplished, in spite of the many adhesions, but the patient died a week later of the septic condition present at the time of operation. Langfitt points out the necessity for careful diagnosis and prompt action in such cases, as it seems likely that the woman would have recovered if she had come to operation before infection had begun.

Medical News, New York.

June 3.

8 *Prophylaxis of Lobar Pneumonia. J. M. Anders, Philadelphia.
9 *Causes Underlying Prolonged Loss of Function in Certain Injuries About the Shoulder Joint—Prognosis—Treatment. A. S. Taylor, New York.
10 *Plea for Medical Treatment of the Inflamed Appendix.' A. L. Benedict, Buffalo, N. Y.
11 *Late Results of Surgical Treatment in Gastric Ulcer—Preliminary Report. J. C. Munro, Boston, Mass.
12 *[illegible] phoid Fever. R. H. Johnston, [illegible]
13 [illegible] e Spine. L. W. Ely, New York.
14 [illegible] on the Excretion of Hippuric [illegible] 'rager, New York.

8. **Prophylaxis of Lobar Pneumonia.**—According to Anders, the most efficient prophylaxis for pneumonia must have reference to the accomplishment of four main objects: 1. To overcome individual predisposition. 2. The prompt and thorough disinfection of the sputum and secretions of the upper respiratory tract. 3. Isolation of the patient, especially from the debilitated, and disinfection of the sick room, together with its contents, after death or recovery. 4. The observance of certain public measures. The prevalence of influenza during the last fifteen years has brought about an increased receptivity for and incidence of the pneumococcus infection. Certain degenerative lesions, especially of the cardiovascular system and the kidneys, have shown increased incidence during the last two decades; and these are found to be associated or antecedent conditions in the majority of cases of pneumonia, hence are probably potent, predisposing factors. The indoor conditions during the cold season favor multiplication and propagation of the pneumococcus and at the same time tend to diminish resistance to infection by the specific organism. The aged are peculiarly susceptible to pneumococcus infection, hence their bodies should be kept as strong and healthy as possible, especially during the pneumonia season. To overcome the predominating factors in individual predisposition, special attention must be paid to the subject of ventilation, to appropriate clothing, and to the avoidance of agencies that cause degeneration of the heart, blood vessels and kidneys, as alcohol, social excesses, an overstrenuous business or professional life, and the like. The sputum is the principal source of infection, and should be thoroughly disinfected so soon as it is expectorated and then destroyed by burning. A large proportion of the general populace harbors the pneumococcus in the nasopharynx, and this is especially true in families and in institutions in which cases of pneumonia have occurred; hence thorough cleanliness and systematic disinfection of these chambers should be carried out during the pneumonia season, more particularly in the case of persons more or less exposed to the virus of the disease. Means to prevent dust from accumulating and its daily removal from the home and the city streets are imperatively demanded. Public health authorities should be given full executive power to carry out rules and regulations relative to pneumonia looking to the prevention of its spread, as in the case of other infectious and contagious diseases; they should also carry on a campaign of public education. Measures of prophylaxis must accord with intelligent public opinion before they can be rendered wholly efficient either by municipal or private authority.

9. **Causes of Loss of Function in Injuries About Shoulder Joint.**—In cases of injury about the shoulder joint followed by prolonged disability, Taylor says that the paralyzed muscles are in groups corresponding to the exit of their motor nerve supply in the roots of the brachial plexus from above downward. The lesion is situated in the roots of this plexus, most commonly at the junction of the fifth and sixth cervical roots, but it may involve any portion or all of the roots from above downward. The lesion is caused by too great diastasis of the head and neck from the shoulder, which results in overstretching of the nerves, followed by paralysis, traumatic neuritis, and often cicatricial compression of the nerve, with permanent impairment of function. The prognosis is not very favorable. Treatment consists of immobilization of the extremities, with counter irritation over nerve roots, followed later by massage, electricity, etc., and finally, surgical interference, in selected cases.

10. **Medical Treatment of Appendicitis.**—Benedict argues in favor of medical treatment of appendicitis and discusses the reasons therefor. He does not hold that this is the treatment for every case of appendicitis, but simply pleads for proper discrimination and rational treatment, not neglect under morphin in cases in which operation is unnecessary. The medical treatment of the acute and subacute case should be based on the conception that in most cases the ordinary colon bacillus and other regular inhabitants of the bowel are responsible for the diseased process. He holds strongly to the belief in free catharsis, and, if indicated, bowel and stomach washes.

11. **Late Results of Surgical Treatment of Gastric Ulcer.**—Of 146 cases of operation for lesions of the stomach, Munro reports on the end results in 134 cases, or 91 per cent. Of this number, 90 operations were done for gastric ulcer, and in 9 cases the end results are known. Munro says he does not feel that the ideal method for the routine case is attained, but the results are sufficiently encouraging to stimulate him to carry on the operative treatment. The merits and demerits of the various operations employed are discussed in detail.

12. **Laryngeal Complications of Typhoid Fever.**—Johnston emphasizes the importance of a careful laryngoscopic examination in all cases of typhoid showing laryngeal complications. Prompt diagnosis and treatment of the milder complications may prevent the disastrous results arising from the more serious affections of the larynx. Most of the conditions tend to recover, and expectant treatment is all that is necessary in the majority of cases, such as a mild spray of an oily solution of camphor and menthol and non-use of the voice. When ulceration or perichondritis is present, submucous laryngitis must be watched for, and, should it arise, energetic treatment must be instituted at once. Sprays of adrenalin, the swallowing of small pieces of ice, and perfect quiet may tide the patient over. If marked symptoms of stenosis make their appearance, tra-

cheotomy, promptly performed, is the best means of saving life. When permanent adhesions form as a result of the inflammatory process, the tracheotomy tube may have to be worn indefinitely.

American Medicine, Philadelphia.

June 3.

15 *Further Remarks on Ischochymia and Its Treatment. M. Einhorn, New York.
16 *Bright's Disease in High Official Circles at the Nation's Capitol. T. L. MacDonald, Washington, D. C.
17 Observations on Amebas Infecting the Human Intestine, with a Description of Two species, *Entameba coli* and *Entameba Dysenteric.* C. F. Craig, San Francisco, Cal.
18 Office of the Spleen: An Essay in Comparative Physiology. E. T. Williams, Boston, Mass.
19 *Malarial Infection Presenting Symptoms of Multiple Neuritis. G. E. Price, Philadelphia.
20 Lloyd Reaction for Morphin and Other Alkaloids. D. W. Fetterolf, Philadelphia.

15. **Treatment of Ischochymia.**—Einhorn describes cases of benign ischochymia with intense peristaltic restlessness of the stomach which were cured by medical treatment. He also reports cases of ischochymia with a short history of disease which were benign in character. Two cases are described in which tumors of the pylorus and stomach were seen and palpated during operations and left untouched—the patients, however, recovering entirely and remaining well for many years. The indications for medical and surgical treatment of ischochymia are given as follows: (1) Benign ischochymia requires, first, medical treatment; if this be unsuccessful, i. e., if, after a longer period, the fasting stomach, on a fluid diet, is not empty, but contains food remnants, an operation is advisable. (2) Surgical intervention is also indicated in benign ischochymia which has developed subsequent to a condition of continuous hypersecretion of gastric juice (preceded by hemorrhage or not). (3) Malignant ischochymia or one of dubious nature in which, however, a thickening of the pylorus is found, should also be treated surgically (gastroenterostomy and, if possible, resection of the pylorus).

16. **Bright's Disease in High Official Circles at the Nation's Capital.**—Macdonald says that the strenuous life, excessive mental activity and the corresponding degree of physical quiescence and years of overindulgence in rich foods, with the associated high blood pressure, are the essential causes which render Bright's disease frequent in the high official circles at Washington. In conclusion he emphasizes the following facts: Unemployed food products become toxic irritants and menace the structural integrity of the kidneys. Man is an organism built round an eliminative system; when that is abnormal he can not be normal. When the balance between ingestion, metabolism, and elimination is absent, danger is present. Apparently nutritional excess is the germ of nephritis. Mental activity and physical quiescence aid in its production. Carking care and the corrosive influence of worry and mental strain render prominent aid in producing it. It is prone to attack the intellectual and the anxious. Alcohol, while offering it encouragement, has been given a too conspicuous place as a causative agent. It is an extremely insidious disease, and is often well advanced when discovered. It is so far-reaching that its first noticeable effects may be visited on organs and tissues remote from the original disease. The conditions which lead to it are quite amenable to correction if efforts are made sufficiently early. It occurs somewhat frequently at the nation's capital because the congregation of eminent public men means a concentration of worries, wealth, and official feasting.

19. **Malarial Infection Presenting Symptoms of Multiple Neuritis.**—Price reports the case of a girl, aged 8, who had multiple neuritis of 18 months' duration, following malarial infection. The symptoms were pain, paresthesia, tremor of hands, diminished power in all extremities, particularly marked in the flexors of the ankles, and giving the characteristic "foot drop." There was also a slight intermittent rise of temperature. The malarial parasite of the æstivo-autumnal variety was found in the blood.

New York Medical Journal.

June 3.

21 *Medical and Surgical Treatment of Gastric Ulcer. B. Robinson, New York.
22 *Medical Treatment of Gastric Ulcer. J. Friedenwald, Baltimore, Md.
23 *Employment of Celluloid Plates for Covering Openings in the Skull in Operations for Epilepsy, Brain Tumor, etc. W. P. Nicolson, Atlanta, Ga.
24 *Recurring Subluxation of the Femur an Unusual Sequel to an Incomplete Fracture of the Neck of the Femur. P. Le Breton, Buffalo.
25 Loss of the Sign Language in a Deaf Mute from Cerebral Tumor and Softening. C. W. Burr, Philadelphia.
26 Prevention of Insanity in Its Incubation by the General Practitioner. J. T. W. Rowe, New York.
27 Inguinal Bubo as a Complication of Malarial Fever; Additional Report. A. C. Smith, New Orleans.

21. **Gastric Ulcer.**—Robinson has collected the histories of 35 cases of gastric ulcer, in which 18 of the patients were operated on, the balance having been placed under medical treatment. The results of operations were ten deaths, seven recoveries, with the result unknown in one case. The results of medical treatment were no deaths, ten cured, one improved, with the results unknown in six cases. Of the patients operated on, a gastroenterostomy was done in five—four posterior, one anterior. Most of the other operations were for emergency cases and consisted in sutures of the ulcer area only. Of 43 cases of gastric ulcer at another hospital, 39 patients were under medical treatment and four under surgical treatment. Of the medical cases, 26 patients were cured (in one, no treatment); improved 10; unimproved 1; died 1; unknown 1. In the four surgical cases, one gastroenterostomy was done, one excision of the ulcer, one exploratory operation, and one McGraw ligature operation. Robinson concludes that acute gastric ulcer must be recognized clinically, for it usually heals, and the treatment is purely medical. A considerable minority fail to do so and constitute a share of the chronic ulcers. Despite the brilliant results of gastroenterostomy in the treatment of gastric ulcers, there may be forcible objections to it. Any form of gastroenterostomy is a grave operation. However, in emergency cases no rational preventive medical treatment can be carried out.

23. **Celluloid Plates for Covering Skull Defects.**—Nicolson discusses the use of celluloid for closing in defects in the skull, the result of operations for epilepsy, brain tumor, etc., and reports 6 cases, giving a description of the technic employed by him. Nicolson makes the following claims for the routine application of this principle to all operations where we are compelled to make openings of any size in the skull, or where a larger area has been removed by accident: 1. It is safe, does not add any risk to the operation, and the materials required are easily obtainable. 2. It not only removes the pressure and irritation, but, by its resistance, prevents a recurrence from the subsequent consolidation of the coverings in a false position, due to atmospheric pressure. 3. It protects the patient from external influences, and not only makes him feel safer, but actually safer. 4. It enables us to be much more untrammelled in the amount of bone that we can remove. 5. It prevents deformity which, especially when beyond the hair line, is necessarily great in large bone removals, and this produces an important cosmetic result. 6. It does away with the necessity for introducing substances for preventing adhesion between the scalp and dura mater. 7. In the event of a necessity for subsequent invasion of the brain it enables one rapidly to reach the seat of trouble, without finding adhesions to confuse and to obstruct.

24. **Subluxation of Femur.**—The interesting points in LeBreton's case were that a recognized incomplete fracture had been received which nature repaired. The patient adopted a position to favor the leg, which finally resulted in a stretching of the capsule of the joint and a tendency to luxation, so that while standing and walking the head of the femur was not in the acetabulum. A short period of immobilization by plaster cured this very marked deformity.

Boston Medical and Surgical Journal.

June 1.

28 *The Experience of Nine Years in the Treatment of Diphtheria with Antitoxin. J. H. McCollom, Boston.
29 Description of "Pfeiffer's Disease" (Glandular Fever), with a Report of Two Cases. A. H. Wentworth, Boston.
30 Report on Early Diagnosis of Tuberculosis. A. C. Klebs, Chicago, and others.
31 Consideration of the Pelvic Articulations from an Anatomic, Pathologic and Clinical Standpoint. J. E. Goldthwait and R. B. Good, Boston.

28. **Nine Years' Experience with Diphtheria Antitoxin.**—Following a brief review of the early history of diphtheria, McCollom discusses the treatment with antitoxin in Boston and in several other cities in the East. The article is elucidated by a number of charts. Chart A shows the percentage of mortality at the Boston City Hospital proper and at the South department from 1888 to 1904, inclusive, with the percentage of mortality of intubations. Previous to 1895 the death rate varied from 46 per cent. in 1888 to 48 per cent. in 1893. In 1890 and in 1894 the death rate was 36 per cent. and 38 per cent., respectively. In 1895, in the latter part of which year the South department was opened and antitoxin was given to every patient ill with diphtheria, the death rate fell to 14 per cent. Since that time it has fallen gradually to 9.5 per cent. If the deaths that occurred within twenty-four hours of admission are eliminated, of which there were forty, the actual mortality of diphtheria amenable to treatment during 1904 was 6.95 per cent. The mortality rate of intubation cases previous to the use of antitoxin varied from 78 to 86 per cent. From 1895 to 1904, the mortality rate of these cases varied from 64 to 26 per cent. This diminution in the mortality rate is attributed to the use of antitoxin. Chart B indicates the ratio of mortality per ten thousand of the population for thirty years. Chart C shows the percentage of cases of diphtheria sent to the hospital, with the percentage of deaths to the population from 1888 to 1904, inclusive. Chart D shows a ratio of mortality per ten thousand of the population in Boston, New York, Philadelphia, and Brooklyn for the past twenty years. Chart E shows the relative advantages of intubation with antitoxin as compared with tracheotomy without and intubation without. McCollom concludes that antitoxin is of immense value in the treatment of diphtheria, but in order to obtain the best results it is important that the serum should be given at the earliest possible moment in the course of the disease. In severe attacks, it should be given in very large doses. In laryngeal diphtheria, in the majority of instances, intubation is the operation of election.

Lancet-Clinic, Cincinnati, Ohio.

May 27.

32 Considerations on Inherited Syphilis, with Special Reference to Paternal Inheritance. A. Ravogli, Cincinnati.
33 *Medical Aspects of Appendicitis. J. Eichberg, Cincinnati.
34 Pathology of Typhoid Fever. J. E. Griewe, Cincinnati.
35 Clinical History of Typhoid Fever. E. Campbell, Cincinnati.
36 Typhoid Fever Treatment. J. H. Landis, Cincinnati.
37 Surgical Treatment of Perforation in Typhoid. N. P. Dandridge, Cincinnati.

June 3.

38 Cerebrospinal Meningitis. G. A. Fackler, Cincinnati.
39 *Bi-Inguinal Celiotomy. S. Stark, Cincinnati.
40 Typhoid Fever in Children. W. W. Pennell, Mt. Vernon, Ohio.

33. **Medical Aspects of Appendicitis.**—Eichberg discountenances what he terms the "frantic hurry" to unload the bowel, and urges that nature be given a chance to circumscribe the seat of danger with a wall of lymph, which makes surgical intervention more easy and successful. If the case does not call for immediate operation, no harm is done by allowing the bowel to rest for 36 or 48 hours. The colon can then be unloaded by a small enema. He considers it of some advantage to give from the start one-tenth grain doses of calomel at intervals of two hours. Morphia, which he gives invariably, goes well with calomel. All food is withheld for at least 48 hours, and a tablespoonful of water, not too cold, is given every half-hour. He says that, in his hands, this treatment has averted the necessity of operation in a number of patients who have not had more than the primary attack. The patient must be watched carefully as to pulse, respiration, facial expression and local conditions, and from these deductions can ordinarily be drawn safely as to whether his interests require more than the purely medical treatment.

39. **Bi-Inguinal Celiotomy.**—This operation described by Stark differs from the Goldspohn operation in the closure of the peritoneal cavity, the suture of the round ligament to Poupart's ligament, and the disposal of the internal abdominal ring and inguinal canal. The incision is made in the line of the inguinal canal from the spine of the pubes to a point a short distance above the internal abdominal ring, altogether from two and a half to three inches in length. The aponeurosis of the external oblique being exposed, the intercolumnar fibers are split and the incision through this fascia is continued upward and downward toward the internal ring. The lower portion of the aponeurosis is rapidly separated from its adjacent tissues with the index finger until Poupart's ligament is reached. This flap is then held downward in the grasp of a wide-mouthed hemostatic or by means of a blunt retractor and all the tissues imbedded in the canal rapidly raised by dissection with the finger. The complete isolation of the ligament from its surrounding structures is then effected, and a strip of gauze is passed underneath, through the medium of which all further manipulation on it is carried out. With the continuance of traction, a pouch of peritoneum is made to present above the ligament, and this is snipped transversely with the scissors. The peritoneal cavity now being opened, the aperture is caught on either side at its upper extremity by two artery forceps, and, while traction on the ligament is kept up, the peritoneum is severed closely from its attachment to the ligament on either side with the scissors as high up as may be deemed desirable. One or two fingers are introduced into the peritoneal cavity in order to determine the presence of pelvic adhesions and to remedy the same, to investigate the condition of the appendages of that side, and, if need be, to operate on them and to note the degree of uterine support in the round ligament while traction is being made thereon, and to liberate it still further from the broad ligament if the support is insufficient. The wound is then packed with gauze wrung out of hot salt water and the same procedure is gone through with on the opposite side. The peritoneal cavity is closed by catching the upper portion of the opening by means of an artery forceps in such a manner that the opposing surfaces of the peritoneum are approximated and are united by means of a fine continuous catgut suture, the last stitch including the inner border of the ligament, which has been continuously drawn on by means of the gauze strip. The round ligament is then sutured to Poupart's by means of interrupted fine silk sutures, the first stitch being applied just below the lower border of the internal abdominal ring. Three or four sutures are employed and the redundant proximal portion of the ligament is held together in the form of a loop, the base of the loop tied off with catgut and the portion above the ligature cut off. Closure of the internal ring is accomplished by suturing the internal oblique transversalis muscle and fascia to Poupart's ligament, for which silk is used. Ordinarily, it is unnecessary to close off any more of the canal, but should it seem weak or should a hernia exist the remainder of the conjoined tendon can be sutured to Poupart's ligament above the attachment of the round ligament. The divided aponeurosis of the external oblique is brought together by interrupted catgut sutures and the skin wound closed in the ordinary manner by subcuticular suture or interrupted silkworm gut. The other side is treated in the same manner. If a suitable pessary has not been introduced before the operation because of adhesions interfering with replacement, this is now done and permitted to be worn two or three months.

St. Louis Medical Review.

May 27.

41 *Two Cases of Congenital Anomalies of the Female Genital Tract. S. M. Brickner, New York.

41. **Congenital Anomalies of Female Genital Tract.**—Brickner cites one case of atresia hymenalis, with hematometra and hematocolpos, and one of total atresia of the vagina, with absence of the uterus.

Annals of Otology, Rhinology and Laryngology, St. Louis, Mo.

March.

42 Contribution to the Study of the Secreting Mechanism of the Nose. J. L. Goodale, Boston, Mass.
43 *Skiagraphy as an Aid in the Diagnosis and Treatment of Diseases of the Accessory Sinuses of the Nose. C. G. Coakley, New York.
44 Radical Operation for Chronic Suppurative Otitis Media. W. C. Phillips, New York.
45. Further Remarks on a Case of Cholesteatoma. W. H. Dudley, Easton, Pa.
46 *Mycosis of the Throat Treated by the Roentgen Ray. L. M. Hurd.
47 *Technic of the Radical Operation for Chronic Suppurative Otitis Media. J. D. Richards, New York.
48 Brain Abscess, Resulting from Chronic Purulent Otitis Media J. F. McKernon, New York.
49 Case of Sarcoma of the Maxillary Sinus. Z. L. Leonard, New York.

50 Caries of Both Petrous Pyramids—Removal of the Entire Petrous Portion of the Cranial Base. P. Cauzard, Paris.
51 *Relative Frequency of the Dental and Nasal Origin of Antral Empyemata.* G. L. Richards, Fall River..
52 **Results from the Treatment of Vertigo, Tinnitus and Deafness by Babinski's Method.* Dr. Tretop.
53 Lumbar Puncture and Affections of the Ear. E. Lombard and H. Caboche.
54 Appearance of the Fundus Oculi in Diseases of the Ear. F. Tenzer, Berlin.

43. Skiagraphy in Diseases of Nasal Accessory Sinuses.—Concerning the value of skiagraphy as an aid in the diagnosis and treatment of disease of the accessory sinuses of the nose, Coakley says that it is possible by means of a skiagraph to determine the presence or absence of a frontal sinus which extends vertically above the glabella. A frontal sinus may be small, parallel with the upper inner margin of the orbit and not detected in the skiagraph. In all cases of unilateral disease of the frontal sinus verified by operation, he has observed a cloudiness in part or all of the area occupied by the sinus and indistinctness in the outline of the cavity when compared with the opposite or healthy side. The skiagraph has invariably shown the frontal sinus to be somewhat larger in all dimensions than it proved to be when operated on. This is undoubtedly due to the divergence of the rays as they pass from the tube to the plate. A good negative may be depended on to show the septum separating one sinus from another. The various incomplete septa that may be present in each sinus are usually shown quite clearly. An oblong, narrow, much darker area, nearly parallel with the upper margin of the orbit on its nasal side, and usually just above it, whenever present, has been found to be an orbital prolongation of the frontal sinus, running antero-posteriorly above the orbit; oftentimes the full depth of the latter. The examination of a skiagraph of the two frontal sinuses when compared with results found on transillumination will aid very much in determining the presence of a diseased sinus. Skiagraphy may prove a valuable aid in determining our method of treating a chronic suppurative frontal sinusitis. A skiagraph may also be of considerable value in determining the height and width of the ethmoidal cell area and the sphenoidal sinuses. If the plate can be so arranged as to include the superior maxilla as well, a chronic suppurative process in an antrum presents the same filmy appearance as above noted in similar conditions of the frontal sinus and ethmoidal cells. A healthy antrum presents an irregular, triangular area, dark in color, with a few light colored septa running through it, many of which are ridges present in the wall.

46. Roentgen Ray in Mycosis of the Throat.—Hurd's patient was first given ten-minute sittings, twice a week for six weeks. The pain and discomfort diminished after the first two exposures, and after the fourth exposure some of the smaller tufts in the throat became soft and could easily be wiped off. At the end of six weeks the patient discontinued the treatment for business reasons. Three months later, he returned for further treatment, the condition in he throat having remained stationary during this time. He again received ten-minute sittings, but three times a week, and after three months no spots could be found. The tonsils and pharynx were directly exposed to the rays through a speculum something like a Ferguson vaginal speculum with a large flange to protect the face from the rays. The lingual tonsil and larynx were treated with the rays from the outside. In all, the patient received forty-one treatments; a medium tube with a spark gap of about three inches was used.

47. Radical Operations for Chronic Suppurative Otitis Media.—In this paper, Richards describes a few points in the technic of the operation which are new and which he deems of some advantage.

52. Babinski's Treatment of Vertigo, Tinnitus and Deafness.—Tretrop says that in cases of labyrinthism accompanied or not by lesions of other parts of the auditory organ, when other treatment has no effect, we are justified in proposing lumbar puncture while telling the patient that it is not a panacea, but a method that gives a percentage of cures and also failures. The attacks of vertigo which are often so annoying are the most favorably influenced, then comes the tinnitus, and last the deafness. He states that the persevering and judicious use of Delstanches masseur-rarefier, by decompressing the labyrinthine liquid, in similar cases, may yield unexpected results. Its use by the patient himself, however, must be discouraged, as he will employ it indiscriminately and only do harm. Deaf-mutism appears amenable to this method of treatment. This treatment has a better chance of success if a careful examination shows that some internal ear perception still exists and that the latter can be developed by appropriate educational treatment. The method can be advised only as a chance of cure, without promising anything. In both classes of cases—pure labyrinthine affections and those complicated with deaf-mutism—careful examination, noting the lesions and measuring the hearing power, is necessary before operation, if errors would be avoided.

University of Pennsylvania Medical Bulletin, Philadelphia.

May.

55 **Action of Alcohol on the Circulation.* H. C. Wood and D. M. Hoyt.
56 *Occurrence of Epidemic Cerebrospinal Meningitis in Philadelphia, Winter 1904-05.* A. C. Abbott, Philadelphia.
57 Metastatic Ophthalmitis, with the Report of a Case which Developed Thirty-one Days After Confinement. G. E. de Schweinitz.
58 *Study of Fifty Cases of "Perforation in Typhoid." J. A. Scott.
59 *Use of Iodid of Silver in Urethritis.* E. H. Siter and A. A. Uhle.
60 Studies on Cell Granula and Ameboid Movements of the Blood Cells of Limulus. L. Loeb.

55. Action of Alcohol on the Circulation.—The facts which Wood and Hoyt have determined experimentally in regard to the action of alcohol on the circulation are: 1. In the normal dog alcohol does not usually either in small or large dose distinctly increase the arterial pressure, although occasionally such an effect appears. 2. The action of alcohol on the circulation in dogs suffering from an infective fever, so far as the blood pressure is concerned, is similar to its influence on the normal dog. 3. After section of the spinal cord in the cervical region, with maintenance of the respiration, alcohol distinctly and consistently increases arterial pressure; in other words, alcohol increases arterial pressure after the general vascular system has been separated from its dominant vasomoter centers. 4. The administration of small doses of alcohol increases very markedly the rate of flow of blood through the large arteries, as measured by Ludwig's stromuhr. This increase of rate being consistently maintained under the repetition of the intravenous injection of alcohol until the time comes when the rate of flow gradually lessens until, under the paralytic influence of the alcohol, it becomes much smaller than its normal. The increase of the rate of flow is in nowise dependent on or directly related to the arterial pressure, as it may occur without the pressure being sensibly affected. 5. Alcohol .25 to .5 per cent. added to nutritive fluid feeding an isolated working reptilian heart markedly and persistently increases the amount of this fluid pumped in a given length of time by the heart; that is, markedly increases the work done by the heart, the withdrawal of the alcohol being followed at once by a corresponding decrease in the heart work. If from .50 to 1 per cent. of alcohol be added to the nutritive fluid there may be a primary condition of increase of work, followed often in a few minutes by marked lessening of the work done. Larger percentages of alcohol immediately decrease the activity of the isolated reptilian heart.

58. "Perforation of Typhoid."—In 1,948 cases of typhoid studied by Scott, there occurred 153 deaths, a total mortality of 7.8 per cent. In this same number of cases there occurred 50 cases of perforation. Scott concludes that perforation of the bowel in typhoid fever is more common than is generally supposed, occurring once and a trifle over in every three deaths. The most common time of perforation is between the fourteenth and the twenty-first days. In 92 per cent. of the cases in this series, the perforation occurred between the second and fifth week, inclusive. The earlier cases are probably perforation in a relapse; now and then perforation may occur without evidence of previous illness. Perforation occurs in cases of all grades of severity, from the ambulatory to the hemorrhagic type. It is most common in those with moderate (25 per cent.) and severe (50 per cent.) infection (75 per cent.). It is not more common in the hemorrhagic than in the mild cases (8 per cent. each). The ileum is the common site of perforation (86 per cent.); the majority occur within twelve inches of the ileocecal valve; the appendix and colon respectively are the next most frequent sites of perforation in this series of cases. Pain of some kind is present in 75 per cent. of all cases. In 50 per cent. of the cases the onset is sudden and severe and of increasing intensity, localizing itself to a special zone. In 20 per cent. of the cases the pain is of slow onset, not localized, with general distribution. In some cases (12 per cent. of this series), no pain is complained of, and the usual symptoms of perforation are absent. Tenderness and rigidity are present in from 75 to 65 per cent., respectively, of all cases, and are usually combined; in some cases either one or the other may be wanting; rigidity especially may be absent in patients with rather a pendulous and relaxed abdominal wall. When perforation is suspected, the temperature should be taken every hour; only by this means can the immediate rise and slow fall to normal or subnormal which often occurs be detected; in some cases, and especially those of extreme toxicity, no noteworthy change at all in the pulse, temperature, or respiration can be detected when perforation occurs. Distention (if absent during the course of the disease and at the time of suspected perforation) is a late symptom of perforation. The obliteration of liver dullness is not a reliable sign of perforation. The study of the leucocytes is of little aid. In a few cases, their increase is such as to confirm the diagnosis. In a considerable number of cases, there is a decided reduction in leucocytes after symptoms of perforation. Differential counting is not of practical use. Before being assured of the diagnosis, right-sided pleurisy, pneumonia (especially in the young), cholecystitis, acute gastrointestinal indigestion, femoral and iliac thrombosis, appendicitis, peritonitis without perforation cystitis, rupture of a mesenteric gland, or even hemorrhagic exudation into the abdominal muscles (Zenker's degeneration) should be considered. Even then mistakes in diagnosis will be made. While nature will infrequently close one, two, or even three perforations, the only rational procedure when perforation occurs is operative interference. No case is too desperate for the attempt. Not infrequently, in the so-called mild cases, the patient succumbs, while very ill patients recover. The diagnosis made, time for operation has arrived; its important point is rapidity. Closure of the perforation and drainage is all that is needed; from fifteen to twenty minutes should suffice.

64. **Catarrhal Deafness.**—Lautenbach considers those cases of deafness often termed "dry" cases as distinguished from the results of suppuration—cases in which the drum-head is unruptured; when the deafness is not of centric or nervous origin, not caused by the direct action of toxic agents, nor the result of injuries. Nose disease is practically always the cause of catarrhal deafness. Nose diseases are usually curable and easily controlled in the early stages, and treatment should be persisted in until this is accomplished, but they are difficult to cure when of long standing. The proper way to avoid catarrhal deafness is to cure the nose in the first stage before the ears become affected. This is the best treatment and is prophylactic, should the ear disease be present and in its incipiency. In the second stage, treat the nose vigorously and treat the ears carefully and persistently until a cure is effected. This is next to the best method and is practically always positive in its results. Should the ear disease be of long standing, treat the nose, but be sure to treat the ears vigorously and persistently, using both ability and patience to the greatest possible extent until the maximum of hearing and comfort is attained in that particular patient. Afterward see the patient at regular intervals of from three to six months, in order to see that there may be no retrogression. If this occurs, commence treatment anew. In this class of cases this is the best that can be done. The results may not be so favorable as we may desire, but under the conditions they are the best attainable. It is to avoid this third stage that we should devote our best efforts. In the first stage, that of disease of the nose only, we can be sure of a cure; in the second stage, we can usually be pretty sure of a cure. It is in one of these two stages that the case should be carefully and persistently treated. In the third stage, the progress of the disease can be stopped and usually the hearing can be improved; the measure of gain depending on the form the disease has assumed and the length of time it has existed.

Pennsylvania Medical Journal, Athens.

April.

61 Tuberculosis of the Gastrointestinal Tract. J. A. Lichty, Pittsburg.
62 Pleurisy with Effusion. J. E. Rigg, Wilkinsburg.
63 Removal of Cataract Without Iridectomy. J. E. Willetts, Pittsburg.
64 Thoughts as to the Cause and Cure of Catarrhal Deafness. L. J. Lautenbach, Philadelphia.
65 Reduction of Maternal and Infantile Mortality in Private Obstetric Practice. D. P. Rettew, Coatesville.
66 Mastoiditis. F. W. Frankhauser, Reading.
67 Autointoxication—Etiology and Diagnosis. I. N. Snively, Philadelphia.
68 Recovery, Without Operation, from Perforation of the Intestine in the Course of Typhoid Fever; Death from Hemorrhage. J. H. Musser, Philadelphia.
69 *Carbonate of Creosote in Pneumonia. C. P. Stackhouse, Wilkesbarre.

69. **Carbonate of Creosote in Pneumonia.**—Stackhouse finds that carbonate of creosote is of decided value in both the bronchial and lobar forms of pneumonia. In mild cases, if the patients are seen early, they are practically well in 24 hours. In severe cases, there is usually a response within 24 hours and normal conditions are reached in from 2 to 5 days by lysis. Complications are rare, and if present are mild. Convalescence is shortened. Children respond more promptly than adults.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London.

May 20.

1 *Causes and Treatment of Edema. J. D. Mann, Salford Royal Hospital.
2 Treatment of Purulent Cavities. R. H. Woods, Dublin.
3 Frontal Sinus Empyema Followed by Subdural Abscess. A. J. Martineau, Brighton.
4 *Remarks on Complete Prostatectomy Founded on Fifteen Cases. J. L. Thomas, Cardiff.
5 Series of 60 Cases of Total Enucleation of the Prostate for Radical Cure of Enlargement of that Organ. P. J. Freyer.
6 *Treatment of Tuberculosis and Tuberculin Inoculation. T. W. Brown, Wallington.
7 *Treatment of Seasickness. J. M. Sharpe, R. M. S. *Ultonia.*

1. **Edema.**—Mann discusses the various theories of the causation of edema, and details the treatment of this condition in full. In cardiac edema, when the heart alone is at fault, physiologic rest is the most potent of all remedial agents; but in most cases of failure of cardiac compensation, rest alone is insufficient to restore it. Of drugs he prefers digitalis to strophanthus. When the incompetent kidneys fail to respond to the stimulus of diuretics, hot air baths and vapor baths must be resorted to. He advises against allowing the patient to drink copiously of water during the administration of the bath, because the water thus drunk is added to that which is already retained, and, therefore, in proportion to its amount, it neutralizes the remedial action of the bath. Regulation of the diet is also of importance. The indications are to avoid excess of proteids and of such dietetic substances as are likely to irritate the renal epithelium or to increase the retention of water. The quantity of liquid allowed to dropsical patients with Bright's disease should be determined by careful consideration of the conditions involved. The plan frequently adopted of causing the patient to drink copiously of liquids in order to promote the elimination of end-products is fallacious on two grounds: First, the kidneys are incompetent to excrete urine of normal molecular density, consequently it is poor in solid constituents; second, the fact that edema is present indicates a tendency to retention of water which lays under contribution the whole of the liquid imbibed, leaving but a small proportion of the excess to act as the vehicle for carrying away effete products in the urine, so that the edema is increased in place of the tissues being flushed out. On the other hand, undue restriction of liquids impedes the

output of a certain proportion of solid constituents which the kidneys are still competent to eliminate, provided that the volume of urine be not arbitrarily checked. When the volume of urine is ample, the intake of liquid usually needs no restriction with scanty urine, the intake should be adjusted by comparing daily the intake with the weight of the patient; increase in weight would suggest restriction of intake. It is better to aid diuresis by a sufficiency of water than to attempt to induce it by copious imbibation.

4. **Prostatectomy.**—Thomas reports on 15 prostatectomies—13 suprapubic and 2 perineal—with 2 deaths, 1 the result of operation, occurring 48 hours afterward, and the other due to pneumonia, about nine days after operation. The ages of his patients varied from 56 to 77. The two patients who died were operated on by the suprapubic method. Thomas says, speaking of the use of antiseptics in these operations, that weak antiseptic solutions for washing out the bladder are only a source of local irritation, plus the possibility of being absorbed and throwing unnecessary tax on the eliminating organs. Sterilized salt solution is better for irrigation, because the beneficial effect is really due to the mechanical removal of surgical dirt. Antiseptics to be of any germicidal value must be strong, and for suprapubic operations on the bladder pure tincture of iodin poured into the bladder (2 to 4 drams) through the suprapubic opening is an excellent preparation to correct septic conditions either at the time of operation or at subsequent dressings. It is better than any powder, he states, because it runs into all the nooks and crevices, and comes into contact with the entire field of operation.

6. **Tuberculosis and Tuberculin.**—Brown reports a case of tuberculous ulceration of the bladder which, failing to respond to antiseptic and constitutional treatment, was treated with tuberculin, Koch's TR. Beginning with .04 mg., the dose was raised gradualy to .25 mg., which was continued, every other day, for a week, when the patient was given .5 mg., every four days, for about one month. The dose was then increased to .75 mg., which was kept up for about one month, when it was increased to 1 mg., which was given once a week, and is still being used. After three months of tuberculin treatment the ulcers in the bladder had healed completely, but there were still present a few scattered nodules. The patient had increased in weight and shows a general improvement.

7. **Treatment of Seasickness.**—Assuming that seasickness is a reflex action of the stomach to a certain stimulus, and that this stimulus enters the brain through the optic tract, Sharpe advises the following treatment, which he has used successfully in 50 cases: Two or three drops of a solution of atropin (4 gr. to the ounce) or other mydriatic were dropped into one eye daily, after a satisfactory examination with the ophthalmoscope, etc., or, when the patient objected, one eye was merely bandaged; thus, by altering the principal focus, the motion of objects on board a ship (which no doubt forms the impulse) is not so uniformly transmitted to the brain.

The Lancet, London.

May 20.

8 Financial Relations Between the London Hospitals and Their Affiliated Medical Schools, and the Bearing of These Relations on Medical Education. H. Morris, London.
9 *Nutrition and Malnutrition. W. H. Allchin, London. (To be continued.)
10 General Cystic Disease of the Kidneys in Brother and Sister; Nephrectomy. E. L. Collis and J. T. Hewetson, Birmingham.
11 *Two Cases of Gangrene with Spontaneous Amputation. E. O. Thurston, Calcutta.
12 Epidemic Cerebrospinal Meningitis and *Posterior* Basic Meningitis. O. Hildesheim, London.
13 **Pneumococcus* Endocarditis Treated by Anti-Pneumococcus Serum. T. J. Horder and H. C. L. Scofield, Edinburgh.
14 *Congenital Elevation of the Scapula. C. R. Keyser, London.
15 Is Man Poltophagic or Psomophagic? H. Higgins, Cambridge.
16 *Influence of Smallpox *on* Vaccination. J. C. Hibbert, Newcastle-on-Tyne.

9. **Nutrition and Malnutrition.**—This is the third lecture on this subject delivered by Allchin. In it he considers the subject of malnutrition when due to errors in diet, when due to maldigestion and malabsorption, and to perverted metabolism, or to the result of a deficient supply of oxygen, and the most marked of the general structural manifestations of impaired nutrition—atrophy, degeneration and death.

11. **Gangrene with Spontaneous Amputation.**—The two cases reported by Thurston show to what an advanced stage natives of India allow disease to progress before applying for relief. The first case occurred in a man, aged 50, and, judging from the slow onset, was probably due to thrombosis. The amputation, which occurred at about the middle of the forearm, was complete with the formation of a conical ulcerated stump. The second patient, aged 40, had gangrene of the right foot and leg. The leg began to slough, and as the sloughs separated, the patient removed them, until finally only the bones remained from the ankle to the level of the tubercle of the tibia. The gangrene in this case was probably the result of embolism from a thrombosis forming in a weak heart during an attack of fever.

13. **Pneumococcus Endocarditis Treated by Antipneumococcus Serum.**—For five days, during the eighth and ninth weeks of the disease, Horder and Scofield injected 10 c.c. of Pane's serum No. 2. Two days after the last injection signs of nephritis appeared, and six days later the patient died in coma. The authors are of the opinion that the serum was given too late to be of any service, and that death was not the result of the treatment, because death with the symptoms of a terminal nephritis is a common event in malignant endocarditis.

14. **Congenital Elevation of Scapula.**—On examination of his patient, a girl, aged 9 years, Keyser found the left scapula to be two and a half inches higher than the right, but the bone of the same size as its fellow. Movement of the arm, both active and passive, was normal. There was no osseous bridge to be felt between the vertebral border of the scapula and the spine, nor was there any lateral curvature of the spine. The spinous process of the third dorsal vertebra, however, felt thicker than normal and was apparently displaced slightly to the left. The inferior angle of the scapula was on a level with the interval between the sixth and seventh dorsal spines. There was no paralysis of any muscle. The *x*-rays showed nothing abnormal and the two arms were of the same length. The child's head was rickety in appearance, but there were no other signs of rickets or any other deformity. The teeth were slightly notched and ridged, as is generally the case in ill-nourished children. As the child suffered absolutely no pain or inconvenience from her condition, no active treatment was adopted, especialy as the deformity was barely visible, except when the patient was undressed.

16. **Influence of Smallpox on Vaccination.**—In 20 cases of smallpox in which the patients were vaccinated or revaccinated by Hibbert after the appearance of the eruption, 11 vaccinations or revaccinations were successful. No second attempt at vaccination or revaccination was made in the unsuccessful cases. In the greater proportion of the successful cases well-marked typical vaccine vesicles appeared at the site of vaccination or revaccination. These vesicles became evident from the fourth to the sixth day after the operation and ran the usual course. In some cases, instead of the typical vesicle there was merely an indurated raised papule. In two cases of semiconfluent smallpox, one patient was revaccinated on the first day and the other on the third day of the smallpox rash; the vaccine vesicles were extremely well marked. Of the 11 successful cases 10 patients were vaccinated or revaccinated on one or other of the first four days of the smallpox eruption. The eleventh patient was not revaccinated until the fourteenth day of the smallpox eruption. Four raised indurated papules at the sites of the operation gave evidence of successful revaccination in this case. Hibbert could not detect that vaccination or revaccination when performed after the smallpox eruption had appeared had any definitely modifying influence on the rash or on the course of the disease.

Journal of Tropical Medicine, London.

May 15.

17 Note on Yaws. G. Pernet.
18 *Leprosy and Christianity. A. Neve.
19 *Notes on the Fish Theory of Leprosy. A. Neve.

Bulletin de l'Académie de Médecine, Paris.

20 (Year LXIX, No. 26.) *Modified and Sterilized Milk.—Le lait de vache sterilisé, sa valeur nutritive. R. Brunon.
21 Discussion sur la paralysie générale et la syphilis. Raymond, Fournier and Lancereaux.

22 (Nos. 17 and 18.) Cas de trypanosomiase chez un blanc (in a white man). A. Laveran.
23 (Nos. 19 and 20.) *Recherches microbiologiques sur la syphilis. E. Metchnikoff and E. Roux.

18. Leprosy and Christianity.—In refutation of the claim made by Jonathan Hutchinson that leprosy and Christianity go hand in hand, Neve calls attention to the fact that in northern India less than 5 per cent. were Christians before they became lepers, and that only one or two cases could be found in which adult converts a few years later became leprous. Of 80,000 Christian kols in Chota Nagpur there are none who are now lepers and were Christians before they were lepers. In Purulia asylum the 503 Christian inmates all became converts after they were lepers. There are no Roman Catholics among the Christian lepers. Of 38,500 Roman Catholic converts elsewhere, only 7 are lepers, all of them leprous before baptism. Not more than 1 per cent. of Christian lepers live out of asylums, so that all Christians who are lepers are registered as such. In the Punjab, where there are 39.000 native Christians, apart from those actually converted in the asylums. Neve discovered only one case of leprosy. In Madras there are 27,485 Jains, of whom 14 were lepers, i. e., 5 per 10,000. as against 4 per 10,000 among Christians, and this last figure is greatly in excess because many of the Christian lepers became lepers before conversion. Among the Brahmins, who are strict vegetarians. leprosy exists in the ratio of about 4 per 10.000.

19. Fish Theory of Leprosy.—In this paper Neve shows that the eating of fish has very little, if anything, to do with the causation of leprosy. In the districts of India where fish forms the principal diet of the inhabitants, there are very few cases of leprosy, and in some districts none, while in others, where fish is eaten seldom, leprosy prevails to an alarming extent.

20. Modified and Sterilized Milk.—Brunon describes the workings of the charity milk supply station at Rouen which is supplemented by "nursing consultations" twice a week. Here the infants are weighed, their progress supervised, and the mothers advised. The milk is derived from a model dairy where the cows are curried every day and the milkers scrub their hands and clean their nails before milking. The milk is filtered through sterilized cotton and keeps for several days. It is modified for weak infants by withdrawing a third from below and replacing it with an equal quantity of water to which 1 gm. of salt and 10 gm. of sugar to the liter have been added. Four years of experience have demonstrated to his satisfaction that the nutritive properties of a milk should be estimated from the condition of the infants taking it. Also that milk sterilized by heating to 192 C. (215.6 F.) for forty-five minutes retains its nutritive value. A frequent cause of enteritis in infants is that too large amounts of milk are given. The general tendency is to feed too much.

23. New Spirochaete in Syphilis.—Metchnikoff's communication was mentioned on page 1790. He is convinced that the data which he presents plead seriously in favor of the assumption that syphilis is a chronic spirillosis, produced by Schaudinn's *Spirochaeta pallida*. He found this spirochaeta in 8 cases of syphilis (4 in man and 4 in monkeys), but could not find it in 2 other human subjects and in 2 other monkeys. He never found it alive. The Giemsa stain was used. applied for sixteen hours or more. When more rapid results were desired, Marino's technic was followed. This consists in mixing a methyl alcohol solution of azure blue with a weak aqueous solution of eosin. The result is not so distinct as with the Giemsa stain, but the positive diagnosis can sometimes be made with it in fifteen minutes. He found no traces of these spirochaetes in a number of non-syphilitic cutaneous affections examined. It has proved impossible to date to obtain pure cultures. The *British Medical Journal* states that Levaditi has discovered the new spirochaete in the lesions of a child suffering from congenital syphilis. (See abstract below.)

Presse Médicale, Paris.

Last indexed page 1779.

24 (No. 33.) *The Enema in Art.—Iconographie du lavement. P. Desfosses.
25 La spermatorrhée et sa thérapeutique. Ré-éducation psychique et traitement somatique. P. E. Levy.
26 Traitement des adénites cervicales tuberculeuses. R Siegel.
27 (No. 34.) *La "scarlatinoïde métadiphthérique." A. B. Marfan.
28 Pro et contra les crèches. V. Bué (Lille).
29 (No. 35.) *La "Mutualité Maternelle" de Paris. H. Legrand.
30 *L'anesthésie par l'atropomorphine et le chloroforme. T. Tuffier.
31 Causes et évolution du travail de l'avortement (labor in abortion). E. Bonnaire.
32 (No. 36.) Méningites cérébrospinales à meningocoques. A. Chauffard.
33 (No. 37.) "King's Evil" in France and England.—Le mal du roi. Le toucher des écrouelles en France et en Angleterre. L. Landouzy. Illustrated historical sketch.
34 Le dispensaire antituberculeux de Lyon. J. Courmont.

24. The Enema in Art.—This article is a supplement to one on the same subject published last April. A number of quaint old tiles, engravings, etc.. have since been found, representing the use of the time-honored instrument in past centuries. It is said that the rectal syringe was suggested by the Egyptian ibis, the sacred bird with a very long neck, which has been depicted in Egyptian art with its beak inserted in its anus.

27. "Metadiphtheric Scarlatinoid."—Marfan has coined this term to express the syndrome of the erythema which is liable to develop in a patient convalescing from diphtheria. The general symptoms are frequently so severe that he is inclined to regard it as an actual morbid entity, a *new malady grafted* on the declining diphtheria. The onset is abrupt, with many symptoms resembling those of scarlet fever, including temperature and swelling of the tonsils and glands. In some cases he has observed three recurrences. The erythema generally subsides in two or three days, but the temperature is liable to remain high until from the third to the sixth day. He presents arguments to prove that this scarlatinoid is not due to the use of the curative serum. It never occurs in healthy children injected with antitoxin, and it spreads in series of cases. He regards it as an associated or secondary infection, and discusses whether or not it should be classed with the infectious erythemata or whether it is a true scarlet fever grafted on the diphtheria, but modified in its course by the preceding disease. It is impossible to differentiate positively true scarlet fever from this metadiphtheric scarlatinoid. The fact that the latter has been observed only since serum treatment has been instituted has led to its being considered as due to the serum. This connection is only apparent, however; in the ante-serum days the patients were apt to die before this stage was reached. Since Marfan has been impressed with the resemblance and possible identity of this infectious erythema with scarlet fever, he has the patients isolated at once at the first symptoms, and every child entering the diphtheria ward is isolated for five days as if known to have been exposed to scarlet fever. Since these precautions have been taken, the number of cases of this erythema have been reduced to almost zero, while urticaria after injections of antitoxin has persisted in about the same proportions. This is another argument in favor of the infectious nature of the erythema. Its course is generally short and comparatively mild. He mentions. in the course of his article, that diphtheria under serum treatment is quite a different disease from the classic type of a few years ago.

29. "The Mutual Maternal" Association.—The members of this society pay about sixty cents a year, and these dues entitle them to $2.40 a week for the first four weeks after a childbirth, with an additional $2 a week if they nurse the child. During the last ten years over four thousand mothers were thus aided, and the mortality of the infants has been reduced to 6 per cent., while the birth rate has risen.

30. Mixed Anesthesia with Atropin-Morphin and Chloroform.—Tuffier relates his experiences with mixed anesthesia a few years ago, and gives his reasons for abandoning the method of mixed anesthetics. The patient, under the influence of morphin, seems more as if he had been rendered unconscious by a blow from a club rather than merely put to sleep. The vital processes are at such a low ebb, Tuffier remarks, that he always fears that the organism might be unable to rally in case of any untoward occurrence. No mishap ever occurred in his experience, but this impression has been one of his reasons for discarding the method. The patients in 2 of his cases did not wake for an hour or so after the operation. This prolongs the surgeon's anxiety unnecessarily.

Revue de Chirurgie, Paris.

Last indexed page 1814.

35 (XXV, No. 5.) *De la tuberculose et des sténoses tuberculeuses du pylore. Ricard and Chevrier.
36 *Des kystes hydatiques de l'abdomen. Mabit (Buenos Ayres).
37 *Contribution à l'étude des impotences fonctionelles consécutives aux traumatismes articulaires. Mally and L. Richon. (Continued from preceding volume through Nos. 3 and 4, and concluded.)
38 La chirurgie du coeur (*of* heart). P. Guibal. (Continued.)
39 *La tuberculose du coccyx. H. Caubet. (First part in preceding volume.)

35. *Tuberculosis of the Pylorus.*—*Ricard and Chevrier* have been able to find in the literature 107 cases of tuberculosis of the stomach, but only 16 of tuberculous stenosis of the pylorus. The duodenum was involved in 8.42 per cent. of the gastric cases and in 25 per cent. of the pyloric. The microscopic and macroscopic characteristics of the tuberculous lesion may become entirely obliterated under the action of the gastric juice. In such cases, the nature of the process may be determined from involvement of the surrounding tissues. Tuberculous stenosis of the pylorus is primary in about half the cases, and in other respects it differs from tuberculosis of the rest of the stomach. The ulcerations at the pylorus are due to the direct action of the tubercle bacillus. Elsewhere in the stomach the ulcerations are a result of a gastric "tuberculinosis," the effects of the tuberculous toxin. Such lesions may develop also at the pylorus, but this is the chosen site for the true tuberculous ulcerations. The article is continued. It is based on 4 cases personally observed.

36. Hydatid Abdominal Cysts.—Mabit has had occasion to operate in 18 cases of hydatid cysts. Eight were in the right lobe of the liver, 3 in the left, 2 in the spleen, 3 in the omentum and 2 in the mesentery. He operates by uncovering the cyst, walling it off with compresses, and then puncturing. When most of the fluid has escaped, he draws the cyst out and opens it. The mother cyst is removed and the lips of the incision are then everted and the interior is rinsed with a strong jet of a weak solution of boric acid. This flushes out the cavity and washes away all débris and daughter cysts. He then sponges the cavity dry and examines it for fistulas and bleeding points. It is then detached as completely as possible from adhesions and everything floating—that is, not attached anywhere—is removed and the abdomen sutured in three tiers. The results have been perfectly satisfactory in all the patients treated by the above technic. The 18 cases are described in detail. The affection is so common in Argentina that it is recognized early; none of the cysts were very large.

37. Functionally Impotent Joints After Traumatism.—Mally and Richon call attention to the reflex amyotrophia from changes in the spinal trophic centers liable to follow a traumatic articular affection. They conclude that in all cases of functional impotence following an accident to a joint the concomitant spinal-cord affection must not be overlooked. Besides the familiar symptoms of reflex atrophy, the electric resistance will be found below that of the sound side. The spinal cord exhibits lesions corresponding to the joint affection. In the first or dynamic stage of the lesions in the spinal cord there are no changes in the cells discoverable by our technic, and this phase is curable. After the motor centers become appreciably affected the muscular fiber succumbs to degenerative atrophy, and the process is then incurable. This conception of reflex amyotrophia originating in a joint is important for general surgical pathology. It explains the pathogenesis of a large number of joint affections, such as the passive displacement of the humerus, painful valgus flat foot, painful acquired hip-joint deformities, the genu valgum and scoliosis of adolescents, etc. The extensive experimental research reported established that there is no necessary relation between the intensity of the articular affection and the gravity of the reflex amyotrophia induced by it. There is, however, a certain connection between the duration of the joint process and the gravity of the reflex amyotrophia. The more prolonged the irritation in the joint the more pronounced the lesions in the spinal cord and the greater the probabilities of their being incurable. Reflex amyotrophia is generally severer in the legs than in the arms, as the mechanical irritation from walking, during convalescence, is more intense than from any exercising of the arms. If the joint affection recurs after apparent recovery, the amyotrophia engendered by the joint affection generally leaves some indelible traces, easily detected by electric exploration. The prognosis is more serious the greater the difference between the response to electric tests on the affected and on the sound side. The writers conclude their extensive article with suggestions as to treatment, commending faradization or static electricity for the mild form of reflex amyotrophia. When there are considerable spasmodic phenomena, local faradization is dangerous. Static electricity should be substituted and all forcible measures avoided. Full particulars of 36 cases with results of treatment are tabulated.

39. Tuberculosis of the Coccyx.—Caubet reviews the details of 27 cases published in the literature or personally observed. The only rational treatment, he remarks, is radical extermination of the entire process involving the bone. This treatment is logical, as the tuberculous affection in the coccyx is generally primary and the lesions do not display any tendency to invade the neighboring organs. Any intervention less radical than entire suppression of the focus is a mere waste of time. The various points for superior technic in resection of the coccyx are analyzed and summarized.

Archiv f. Gynaekologie, Berlin.

Last indexed page 1648.

40 (LXXV, No. 2.) Ueber Decidua-Cellen in der Cervix uteri bei intracorporaler Gravidität. M. Blumberg.
41 *Digestive Disturbances in Early Infancy.—Zur Kenntnis der Verdauungs-Störungen im ersten Lebensalter. F. Kermauner.
42 Formation of Perineal Flap.—Die Lappendammbildung bei completer Ruptur, bes. die Lawson Tait'sche Methode. W. Nagel.
43 *Instrumental Dilatation Should Not be Recommended to the* General Practitioner.—Darf die Bossi'sche Methode dem prakt. Arzt empfohlen werden? A. Dührssen (Berlin).
44 *Evacuation of Glands in Operating on Uterine Cancer.—Der Werth der Drüsenausräumung bei der Operation des Uterus-Carcinoms. K. Baisch (Tübingen).
45 *Vaginal Cancers.—3 Fällen von Scheidenkrebs. K. Schmidlechner (Budapest).
46 Partus bei Uterus duplex separatus und Vagina septa. E. Pollak (Vienna).
47 *Internal Secretion of Ovary and Placenta and Their Importance for the Functions of the Mammary Gland.—Die innere Secretion von Ovarium und Placenta und ihre Bedeutung für die Function der Milchdrüse. J. Halban.

41. *Digestive Disturbances in Early Infancy.*—Kermauner states, from his own experience and that of others, that more than 26 per cent. of the infants who succumb to gastrointestinal disturbances are less than a month old. The infection must have taken place during the first days of life. If infection during the first week can be prevented, the child then acquires strength and produces antibodies which, to a certain extent, protect it against infection later. It is not the lack of proper food so much as the lack of proper care otherwise that is responsible for this high morbidity during the first week. Almost all the infants in his charge at the Heidelberg maternity showed the staphylococcus albus in their stools. This infection remained latent or induced dyspepsia accordingly as the infants were kept clean and warm or were allowed to become chilled. The attendants are required to wash their hands each time after changing the diaper of an infant. Heubner even goes so far as to have different attendants take care of the upper and of the lower parts of the body of the infant. The cotton used in powdering is thrown away and a fresh piece taken for each child. The infants suck through a nipple guard to prevent infection from this source, and the mothers are taught to keep the nipple clean and not to touch the rubber guard. The low temperature of the newly born is combated by wrapping in warm woolen blankets and by giving the first bath at a temperature of 40 C. (104 F.), leaving the child in the water for fifteen minutes, and keeping it warm afterward with hot water bottles in the crib. To avoid exposing the infant, the umbilical cord is not inspected until the fourth day after it is dressed.

Cleanliness and warmth are the principal aids in tiding the infant past its defenseless stage and in preventing the latent microbism from developing gastrointestinal disturbances.

44. The Glands in Uterine Cancer.—Baisch remarks that the findings in operations as well as in the cadaver show that the glands are affected by metastases along the physiologic anatomic routes, following a regularly progressive course. The metastasis does not skip about arbitrarily. The glands are found affected in about a third of the cases of operable cancer of the cervix. He reviews the results of 125 operations for uterine cancer with the autopsy findings in 18 patients who succumbed soon after the operation, comparing them with those published by others. They demonstrate the necessity for seeking and removing affected glands, and also that this can scarcely be done by way of the vagina.

45. Vaginal Cancer.—Three cases of vaginal cancer in pregnant women are reported and 13 from the literature are summarized. The patients in the first group were from 20 to 33 years old, and when the age is mentioned in the cases on record it was never over 41. Vaginal cancer is particularly malignant and grows exceptionally rapidly during a pregnancy. Five of the patients died from septic infection during the puerperium, and the others died in less than a year from recurrence after removal of the neoplasm. Living children were born in 10 cases. In treatment, perineal total extirpation of vagina and uterus offers the best chances for success, but if the case does not seem operable palliative measures should aim to relieve and to deliver the child at term. Various contingencies are described with the special technic for each.

47. The Mammary Gland and the Internal Secretion of Ovary and Placenta.—Halban points out that the development of the breast coincides with that of the ovaries. At first there is an "embryonal impulse" imparted by substances from the maternal organism. Then comes the "puberty impulse," connected with the development of the ovaries, then follows the "menstruation impulse," the breasts enlarging at each menstrual period. During pregnancy and nursing the ovaries remain quiescent. The "pregnancy reaction" on the part of the mammæ is not due to influences from the fetus, as it persists after the death of the latter. He attributes it to the influence of the placenta, the trophoblast and the chorionic epithelium, assuming that both placenta and ovaries have an internal secretion analogous in their effects, but that the former is stronger in its action. Both make the mammæ increase in size, and as soon as their influence is removed the enlarged gland settles down to increased secreting functions. During pregnancy the placenta assumes the task previously accomplished to a limited extent by the ovary. Experiences with hysterectomized patients and others have shown that the milk secretion can not be due to the action of the uterus nor to nervous impulses, as it continues after hysterectomy and after the nerves leading to the mamma have been severed. Puerperal involution of the uterus is a true atrophy following the loss of the placenta. The milk secretion enters on the program when the action of the placenta has ceased or nearly so. The milk secretion is disturbed again when the woman enters on a new pregnancy and also by menstruation. The ovary and the placenta alike induce hyperplasia of the mammæ and inhibit the secretory function. Castration removes this inhibition and is advantageously applied to milch cows in dairies. Osteomalacia is an infection which frequently develops during pregnancy and may subside afterward, or if it persists it may be cured by removal of the ovaries. Halban cites a number of facts from comparative anatomy and physiology to sustain this assumption in regard to the etiology of the secretion of milk. He has been elaborating this theory for several years and has become more and more convinced in the course of his research of the close relationship between the ovary and the placenta and that both are directly concerned in the physiology of the mammary gland, and especially in the secretion of milk.

Centralblatt f. Chirurgie, Leipsic.

48 (XXXII, No. 17.) *Treatment of Prolapsed, Gangrenous Hemorrhoidal Nodules.—Zur Behandlung vorgefallener brandiger Hamorrhoidalknoten. R. v. Baracz.
49 Eine neue Nadel (needle). P. Loopuyt (Rotterdam).
50 Success of Bier's "Congestion Hyperemia" in an Acute Suppurative Process.—Ueber eine Beobachtung im Gefolge der Bier'schen Stauungshyperämie bei akut eitrigen Prozessen. Leser (Halle).

Centralblatt f. Gynäkologie, Leipsic.

51 (XXIX, No. 17.) Mechanical Reasons for Rotation During Delivery.—Zur mechanischen Begründung des Rotationsvorganges der Geburt. H. Ostermann.

48. Treatment of Prolapsed Gangrenous Hemorrhoidal Nodules.—Twenty years' experience has only confirmed von Baracz in the advantages of prompt amputation of the gangrenous portion into sound tissue and thermocauterization of the stump. He has never had any hemorrhage, stricture or recurrence with this technic.

Deutsche medizinische Wochenschrift, Berlin and Leipsic.

52 (XXXI, No. 18, May 4.) *Protecting Antityphoid Vaccination.—Zur Schutzimpfung gegen Typhus. R. Bassenge and M. Mayer.
53 *Treatment of Cardiac Insufficiency.—Behandlung der Herzinsuffizienz. A. Hoffmann (Düsseldorf). Postgraduate lecture.
54 Zusammenwirken normaler und immunisatorisch erzeugter Ambozeptoren bei der Hämolyse. H. Sachs.
55 *Epidemic Cerebrospinal Meningitis.—Genickstarre in Ober-Schlesien. Radmann.
56 *Traumatic Affections in Telephone Tenders.—Ueber funktionelle nervöse Störungen bei Telephonistinnen nach elektrischen Unfällen. G. W. Wallbaum (Berlin).
57 *Ueber Spirochaeten-Befunde im Lymph-Drüsen-Saft Syphilitischer. F. Schaudinn and E. Hoffmann.
58 Behandlung der Furunculose und Folliculitis mit Hefe-Präparaten (yeast). A. v. Kirchbauer.
59 Schiller als Arzt (as physician). H. Magnus. See page 1627.

52. Vaccination Against Typhoid.—Mayer discovered some time ago that it was possible to derive a vaccine from bacilli by shaking them up for a certain length of time in distilled water. The filtrate is free from the bacteria themselves, but it contains a potent vaccine. With Bassenge he has been applying this method to the production of a vaccine against typhoid fever. A single subcutaneous injection of 2 c.c., which contains the effective substances of an entire culture, induces such a production of antibodies that the blood displays marked bacteriolytic properties even six months afterward. The vaccine is a yellowish limpid fluid, durable and dosable, while the reaction to the injection is very slight.

53. Treatment of Cardiac Insufficiency.—Hoffmann expatiates on the importance of the functional diagnosis, and whether the insufficiency is relative or absolute. Much depends on the effort demanded of the heart by the mode of life, etc. He regards baths as worth more for prophylaxis than in treatment of heart disease. His experience with the sinusoidal current and even with carbonated baths has not answered his expectations. The remote results of balneologic treatment should be published by physicians more than hitherto. He regards the combination of baths and Zander exercises as absolutely dangerous. When signs of absolute insufficiency appear, rest in bed is necessary, with an ice bag to the heart region, suspended from a hoop spanning the bed, so that its weight does not rest on the heart. The ice bag is not indicated in cases without acceleration of the heart action. If digitalis fails, calomel may prove useful, given in large doses for several days. The diet should be light, preferably fluid, but "thirst cures" do no good. The main point in treating cardiac insufficiency is in the diagnosis and treatment of the underlying affection.

55. Epidemic Cerebrospinal Meningitis.—Radmann's article was summarized in the news columns on page 1627. He suggests that the disease may be transmitted by vermin, as he noticed that flea bites were numerous on the stricken children.

56. Functional Traumatic Nervous Affections in Telephone Attendants.—Wallbaum analyzes the severe functional disturbances resulting from an electric shock received while tending the telephone. If the person calling up "central" rings again while the wire is being connected, before the operator has had time to get out of the circuit, the result is a slight electric charge received by the operator. It scarcely ever amounts to more than 10 volts, and usually is hardly noticed by the operator, although the receiver is bound to her head. Occasionally the shock is very severe, and serious functional disturbances are liable to result. Five typical cases are reported in detail to illustrate the points learned in the course of his extensive experience. First and foremost is the warning that those predisposed by heredity or for other reasons to nervous and vascular affections should be excluded from service as telephone operators. The syndrome resulting from the shock generally commences with fainting, clonic convulsions, swelling of the extremities, especially on the affected side, and disturbances in sensibility. This is followed in time by headache and vertigo, with neuralgia-like pains here and there, especially during cold and stormy weather, with tonic and clonic muscular spasms, colic pains in the abdomen and various paralyses. He attributes to paralysis of the vascular innervation the edematous swellings and extravasation. The mental functions also suffer, the power of concentration becoming more or less impaired. Irregularity in the heart action was a feature of all his cases, as was also a suspicion of hysteria. A person thus affected should not resume the service for a long time even after apparent recovery. Suggestion proved the best means of curing the paralyses and static electricity for the neuralgic pains. Faradization is contraindicated, as too irritating. Ordinary drugs proved ineffectual against the headaches; cold compresses and static electricity were more successful. From ten to fifteen minutes in a bath before retiring proved the best means to combat the insomnia. Carbonated baths were useful in restoring the general metabolism to normal.

57. **New Spirochaete in Syphilis.**—The finding of the *Spirochaeta pallida* in 8 cases of syphilitic lesions is mentioned above, abstract 23. Schaudinn is a member of the Imperial Council of Health, and Hoffmann is a retired army medical officer and privat docent, both trained and accurate observers, especially in the study of protozoa and spirochaetes. The *Spirochaeta pallida*, as they have named the new micro-organisms, was found in smears of extirpated inguinal glands from 2 cases and in the gland juice obtained by puncture in the 6 other cases. The syphilis was from one to four months old. The new spirochaete is almost transparent and extremely motile, tapering to a point at each end. They found two varieties of spirochaetes, the larger one taking the stains readily and found only in the superficial lesions, while the pale, delicate, more thread-like and much smaller *Spirochaete pallida* could be found not only on the surface, but in the depths of the primary and secondary syphilitic glandular lesions. (The illustrated description of the new spirochaete appears in the last number of the *Arbeiten a. d. kaiserl, Gesundheitsamt*, xx, page 527. The only technic that showed up the *Spirochaete pallida* was the following: The smears from fresh syprilitic lesions are made as thin as possible on the cover-glasses, and are fixed in absolute alcohol for about ten minutes after being thoroughly dried. The cover-glasses are then left for sixteen to twenty-four hours in a freshly made mixture of 12 parts Giemsa's eosin solution (2.5 c.c. of a 1 per cent. solution of eosin to 500 c.c. water); 3 parts azure I (solution 1 to 1,000 water), and 3 parts azure II (solution 0.8 to 1,000 water). After briefly rinsing in water the cover-glasses are dried and mounted in oil of cedarwood. This technic shows up the pale spirochaete well. In one of the illustrations seven of the corkscrew spirals are seen in the field, magnified only 1,200 times.)

Münchener med. Wochenschrift, Munich.

60 (LII, No. 16.) Entwicklungsstörungen, Fötalismus und Infantilismus (disturbances in development). A. Hegar.
61 *Suction Applied in Treatment of Inflammations.—Ueber die Behandlung entzündlicher Erkrankungen mittelst Saugapparaten. R. Klapp.
62 Zur Differentialdiagnose zwischen Hernia diaphragmatica und Eventratio diaphragmatica. H. Hildebrand and O. Hess.
63 *Combined Salve and Phototherapy.—Erfahrungen bei Behandlung mit elektrischem Licht unter besonderer Berücksichtigung einer neuen *Lichtsalben*behandlung bei Hautkrankheiten. L. Steiner.
64 Modified Finsen Lamp.—Ueber Verbesserungen der Finsen-Reynlampe nebst Bemerkungen über Lupusbehandlung. Fr. Bering.
65 Ophthalmology of the General Practitioner.—Die Augenheilkunde des praktischen Arztes. Salzer.
66 Zur Diagnose des Trachoms. Junius.
67 *Hysteric Traumatic Affections in Telephone Attendants.—Hysterische Unfallerkrankungen bei Telephonistinnen. H. Bohmig.
68 Bauchpresse und Torsion des Samenstrangs (straining and torsion of spermatic cord). H. Landau.
69 *Verwendung des Santonins gegen Lungentuberkulose. C. Tollens.

61. **Treatment of Inflammatory Affections with Suction Apparatus.**—Bier's success in treating infectious processes on the limbs with his technic of stasis hyperemia was chronicled in these columns recently. In Klapp's communication from the same clinic, the experiences with suction apparatus to apply the same principle to inflammatory processes on the trunk are described and illustrated. On the extremities, the desired result is obtained by applying a tourniquet to the limb. On the trunk it is necessary to use aspirating or suction apparatus. In mammitis, a broad-rimmed glass fits over the breast around its base, and a vacuum is created with an air pump connecting with a cannula through the rubber stopper in the top of the cup or jar. When there is distinct fluctuation in the abscess it is opened with small incisions after local anesthetization with an ethyl chlorid spray, and the glass bell is applied at once. The immediate relief of the pain in all cases of mammitis is one of the greatest advantages of this method of treatment. It aborts early cases and prompt recovery is the rule. Three weeks was the average duration of the 15 cases thus treated, including 13 of puerperal infectious mastitis. At the end of this time the breast had resumed entirely its normal aspect and consistency, without leaving any disfiguring traces. Even infiltrated tissue seems to retain its vitality better under this treatment than by other technics. The milk should be drawn completely with an ordinary breast pump beforehand. It sometimes happened that the application of the suction apparatus promoted the flow of milk, so that where there had been none before the use of the breast pump afterward brought from 50 to 60 c.c. The same principle has been applied to treatment of furuncles, panaritium, abscesses, infected insect bites, etc. One of the apparatus used consists of a broad-rimmed glass tumbler with a large rubber bulb set in the inverted bottom of the tumbler. For the finger he has a cylindrical glass cup with a rubber cuff that fits air-tight around the base of the finger. The vacuum is made with an air pump connected with a spout branching from the cylinder. The results in 100 cases thus treated have been excellent and corroborate all the claims made for this method of treating inflammatory processes. In 4 cases of carbuncle the apparatus was applied for forty-five minutes daily and the pus aspirated through the spontaneous openings. By the third day the carbuncle was soft throughout, the tension relieved and all pain gone. When there is a distinct fluctuation small incisions, not longer than from .5 to 1 cm., are made, or the tip of the pustule is picked off and the aspirator applied at once. The suction should never be violent, usually merely enough to hold the apparatus on the skin. The outcome seems to depend on the care with which the first applications are made. In mastitis, the hyperemia induced should be as intense as the patient can bear without pain, or until the skin over the mamma becomes very red with a slightly bluish tint. He has found it best to remove the stopper of the jar after five or six minutes and to allow the circulation to be restored through the parts for a few minutes before applying the pump again. The patient holds the glass bell against the breast and can regulate the amount of suction to suit herself.

63. **Electric Light Plus Salve Treatment of Cutaneous Affections.**—Steiner describes numerous experiences from Hoffmann's clinic at Leipsic which have established the superior efficacy of a combination of reflected electric light and salve treatment. The results are far better than with either alone. This form of phototherapy seems to act more by the heat generated than by the light rays. The active hyperemia induced is probably the main factor in the results, supplemented by the bactericidal action of the rays. When used with a sulphur or mercurial ointment, eczema, parasitic affections and acne rosacea, etc., were more promptly and favorably influenced than by any other method of treatment in his experience. He gives the details of about three dozen cases.

67. **Traumatic Hysteric Affections in Telephone Girls.**—Böhmig reports 9 cases of neuroses following an electric shock

received while tending the telephone. He examined the young women in from three to twenty-four hours after the traumatism, and has had them under observation for several years. Organic changes were not found in any instance. One case is distinguished by attacks of vertigo on the crossed side, probably due to vasomotor disturbances in the labyrinth. In others, the symptoms involved both sides, and in others only the injured side. The complete picture of the severe neurosis was observed at once after the accident, which speaks against simulation or suggestion as a possible factor.

69. **Santonin as a Remedy for Tuberculosis.**—Tollens learned that santonin is currently used in parts of the orient as a remedy for tuberculosis. His tests on rabbits, based on this fact, showed that santonin has the power to reduce temperature, to induce leucocytosis and to promote respiration by increasing the depth and reducing the frequency of the respirations.

Virchow's Archiv, Berlin.

Last indexed page 1889.

70 (CLXXVIII, No. 2.) Ueber die ersten anatomischen Veränderungen bei Lungen-Phthise (first anatomic changes in phthisis). A. J. Abrikossoff (Moscow).
71 Primäre congenitale Herz-Hypertrophie (of heart). E. Hedinger.
72 Anatomische Untersuchungen über die Aetiologie der Prostata-Hypertrophie. P. Wichmann.
73 Ueber Angiome und sarkomatöse Angiome der Milz (of spleen). Theile.
74 Ueber Psammome der Haut und des Unterhautgewebes (of skin and subcutaneous tissue). M. Winkler.
75 (No. 3.) Die Traktions-Divertikel des Oesophagus. H. Ribbert.
76 Ueber die Arteriosklerose der kleinen Organ-Arterien und ihre Beziehung zur Nephritis. L. Jores.
77 Veränderungen der Aorta bei Syphilis. S. Abramow.
78 Zur Histologie der Arteriosklerose der Pulmonal-Arterie. H. W. E. Ehlers.
79 Fall von Angioma racemosum der Arteria alveolaris inferior. F. Schlagenhaufer.
80 Fall von Chorionepithelioma der Harnblase (of bladder). W. Djewitzki.
81 Fate of Purin Bodies Introduced into the Circulation.—Schicksal der in die Blutbahn gebrachten Purinkörper. W. Ebstein and E. Bendix.
82 Behavior of Leucocytes in Vital Blood Staining.—Verhalten der Leukocyten bei der vitalen Blutfärbung. Rosin and E. Bibergeil.
83 Origin of Blood Plates. H. Hirschfeld. Reply to Presich's Article in No. 1.

Wiener klinische Rundschau, Vienna.

Last indexed page 1490.

84 (XIX, No. 13, April 2.) *Kasuistisches zur Frage der sogenannten essentiellen Nierenblutung (hematuria). H. Schüller.
85 Action of Hemolysins.—Ueber die Wirkung der Hämolysine. K. Landsteiner and M. v. Eisler.
86 *Hematoma of Nasal Septum.—Die Hämatome der Nasenscheidewand, deren Umwandlungen und deren einfache Behandlungsart. E. Baumgarten.
87 (No. 14.) Einige Bemerkungen zu C. Spenglers "neuem Heilverfahren" (treatment with bovine tuberculin). H. Frey.
88 (No. 16.) Compressing Diaphragm.—Die Faszikelrohrblende. Eine verbesserte Kompressionsblende. I. Robinsohn.
89 Contrivance to Hold Roentgen Wires Taut.—Eine Röhrenkabelspannvorrichtung. R. Kienböck.
90 [illegible] lectric Current.—Technik [illegible] hischer Herzphotogramme mit kleiner Elektrizität- [illegible]

84. **Essential Hematuria.**—Schüller reports a number of cases to show the errors liable to be made on the assumption of essential hematuria. In one case, unilateral hematuria was for a long time the only symptom of a chronic, severe parenchymatous nephritis revealed later by operation. Two cases demonstrate the unreliability of unilateral hematuria as a sign of unilateral lesions. In one patient, the hematuria occurred at one time exclusively on one side and then exclusively on the other. In five pregnancies, it appeared always at the twenty-second week, but persisted chronically after a sixth. In another case, the unilateral hematuria was the first and for more than a year the only symptom of advanced bilateral nephritis. Albumin and tube casts did not appear until after two years of hematuria. He regards it as a sign of nephritis in every case, involving either one or both kidneys, even when the hematuria is exclusively unilateral.

86. **Hematoma of Nasal Septum.**—A hematoma developing in the nasal septum after an accident to the nose is generally absorbed and causes no disturbance, but in some cases it may persist and cause chronic perichondritis or obstruction of the nasal passages. In 40 cases in which he has found a hematoma in the septum as the cause of the nose affection, there had been suppuration in only 5. He treats the hematoma by compression with a wick of carbolized cotton as soon as the swelling and pain from the accident to the nose have subsided under applications of ice the first day. The wick is changed every day, a larger one being inserted each time, until all trace of the hematoma has vanished. By tamponing each side of the septum any dislocation or fracture of the cartilage can be corrected.

Wiener klinische Wochenschrift, Vienna.

Last indexed page 995.

91 (XVIII, No. 6.) *Zur operative Behandlung des Kryptorchismus. A Hermann.
92 *Ueber 2 seltenere Ursachen der Duodenalstenose (unusual causes). K. Reitter.
93 (No. 7.) Route of Infection in Alimentary Tuberculosis.—Die Infektions-Wege bei der Fütterungstuberkulose. J. Bartel.
94 Entoptic Perception of Own Circulation.—Ueber entoptische Wahrnehmung des eigenen Blutkreislaufes und ihre Bedeutung in der Lehre von den Gesichtalluzinationen. A. Pick.
95 (No. 8.) Ueber induciertes Irresein (psychic infection). E. Raimann.
96 *Zur Röntgenbehandlung der Leukämie. A. Herz.
97 Ein Plessimeter zur Unterscheidung feinerer Schalldifferenzen (improved plessimeter). K. Feller.
98 (No. 9.) Der akute Tod von Meerschweinchen an Tuberkulose (acute death of guinea pigs). O. Ball.
99 Der Gang der natürlichen Tuberkulose-Infektion beim jungen Meerschweinchen (course in young guinea-pigs). J. Bartel and F. Spieler.
100 Action of Light on Mixture of Eosin and Blood.—Wirkung des Lichtes auf Eosin-Blutgemische. H. Pfeiffer.
101 *Z[illegible] ecula und des Pterygiums. A. Sach- [illegible] n No. 8.)
102 ([illegible] der Latenz der Tuberkulose. A. Weichselbaum and J. Bartel.
103 [illegible] schen Indikationen zur vor- [illegible] prema- [illegible]
104 *[illegible] atigung [illegible] erda.
105 *[illegible] Latitude for Artificial Induction of a Neurosis or Psychosis.—Inwiefern ist beim Vorlegen einer Neurose oder Psychose künstliche [illegible] der Schwangerschaft medizinisch indiziert [illegible] H. Gros.
106 (No. 11.) Ueber [illegible] nach Eiweissfütterung (form[illegible] feeding on albumin). H. L. [illegible]
107 Perineotomia mediana. C. Fleischmann.
108 Experiences with Carlsbad Waters, etc., in Cholelithiasis.—Ueber die mit der balneologischen und der operativen Behandlung des Gallensteinleidens gemachten Erfahrungen. F. Fink.
109 Die Bestimmung des spezifischen Gewichtes von Exsudaten und Transsudaten bei Körpertemperatur (specific gravity at body temperature). M. Engländer.
110 *Zur Frage des Coma diabeticum nach operativen Eingriffen. E. R[illegible] 10.)
111 (No. 1[illegible] Uterus.—Ueber den Gebrauch von [illegible]
112 Fatal Pemphigus Involving Stomach Mucosa After Taking 10 gm. of Sodium Iodid.—Fall von Jodpemphigus mit Beteiligung der [illegible]
113 Nutrition a[illegible] Lens.—Ueber unsere heut[illegible] und Ernährungsstörungen [illegible]
114 Variola und Varicellen. R. Pick.
115 (No. 13.) Ueber die periodisch auftretende (paroxysmale) Lähmung (paralysis). H. Schlesinger. Id. M. Infeld.
116 Action of Eosin on Blood Corpuscles and Serum.—Ueber die Wirkung fluoreszierender Stoffe (Eosin) auf normales Serum [illegible] Pfeiffer.
117 De[illegible] ativa) circumscripta eczemi- [illegible] Lang.
118 Pa[illegible] allpox Pits.—Die kosmetische [illegible] mit Vaselin und Oelvaselin. [illegible] Stegmann.

91. **Operative Treatment of Retention of Testicle.**—Gersuny has treated 4 patients with bilateral undescended testicles by drawing the testicle down with a silk thread tied around the relics of the gubernaculum at the lower pole of the testicle. This thread is then brought down into the scrotum and passed through the septum at its lowest point and tied around the other testicle. This holds each in place without inconvenience, while the firm bridge between prevents their slipping back. Examination three years after the operation showed the testicles still at the lowest point in the scrotum, while the band formed of the two united gubernacula was distinctly palpable.

92. **Causes of Duodenal Stenosis.**—In one of the cases described, the pancreas became self-digested. The subacute development of the process enabled a sac of connective tissue to form around the necrotic mass, thus encapsulating it. Effusion of fluid into this sac increased its size and compressed adjacent organs. The stenosis in the other case had been

caused by an impacted gallstone in the first loop of the jejunum which had been palpated at first, but later became inaccessible to palpation.

96. **Roentgen Treatment of Leukemia.**—In the case described by Herz, the patient was a man of 56, a gardener, with lymphatic leukemia. The proportions of leucocytes remained about the same under Roentgen treatment, but the total number gradually rose and then rapidly sank again. The action of an intercurrent pneumonia on the leukemia is compared with that of the Roentgen treatment. Both were followed by reduction in the size of the enlarged organs, but the pneumonia also reduced the number of pathologic forms of the leucocytes. Neither an intercurrent infection nor Roentgen treatment seem to offer much prospect of a permanent cure. His patient died of the pneumonia. The autopsy findings are described in detail.

101. **Cause of Pterygium and Pinguecula.**—Sachsalber ascribes pterygium to irritation from fine hairs on the inside of the lid. He has found such hairs in all his cases. He removes the hairs and instructs his patients how to pull out the lanugo hairs every week with the aid of a strong magnifying glass. All the previous disturbances, chronic conjunctivitis, congestion, etc., were restored to normal, incipient pterygium retrogressed, and when long established its progress was arrested. He describes 6 typical cases from a large experience and thinks that pulling out these hairs will remove the cause in many cases of pterygium.

102. **Latency of Tuberculosis.**—Weichselbaum and Bartel tested the glands from a number of children who had succumbed to various affections without any apparent tuberculous process or complication. Animals were inoculated with glandular substance, and tuberculous processes developed in consequence from the material from 8 of the cadavers. There must have been living bacilli in the glands tested, and they must have been capable of inducing infection, although no infection had resulted in the patients. General tuberculosis developed in from forty-five days to five months in some of the animals, indicating a certain virulence on the part of the germs.

104-105. **Artificial Abortion.**—Haberde thinks that in every case in which artificial abortion has to be done by the physician to save the mother's life—and this is the only justification, in his eyes—the state should require declaration of the circumstance. The physician should demand a consultation. Gross emphasizes the point that the woman has the right to decide whether any operation and what one should be done on her. In case of a neurosis or mental disease, if she is not able to decide for herself, the physician should be the one to decide for her—not any third person. Consultation with a neurologist or alienist is advisable in these cases, if possible, for the protection of the physician.

110. **Postoperative Diabetic Coma.**—Ruff's article issues from A. Froenkel's clinic at Vienna. It reviews the entire subject of coma following an operation on a diabetic, and shows that this contingency has occurred after the use of all kinds of anesthetics in a series of cases embracing 236 operations on diabetics. Coma developed in 25 patients, with a mortality of 10.6 per cent. A few cases are on record in which the manifestations of the diabetes vanished after the operation. When 2 gm. of ammonia are excreted during the day, the development of coma may be feared, and it is almost certain to occur when the amount reaches 4 gm. Otherwise there does not seem to be any criterion from which to deduce the probability of coma from the quality of the excretions or the severity of the diabetes. Two cases of coma have been reported in which merely local anesthesia had been used, and yet death ensued. The loss of fluids during the operation can scarcely be considered, as cases have been reported in which there was no loss, as in a case described in which a woman of 35 was operated on for the relief of a periappendicular abscess under the Billroth anesthesia, and died in coma next day. Such mishaps may be averted by careful psychic preparation of the patient for the operation, with dietetic measures to reduce the glycosuria. General anesthesia, copious purgation and irrigations should be avoided. Food should not be withdrawn until the last minute, and should be commenced again as soon as possible, by the rectum if necessary. The operation should be postponed until these conditions are secured unless it is a vitally urgent one.

Archivio per le Scienze Mediche, Turin.

119 (XXIX, Nos. 1 and 2, 1905.) Istogenesi delle cisti semplici dell' ovaia (simple cysts of the ovary). D. Cesa-Domenichi.
120 Macroglossia congenita neurofibromatosa. E. Delfino.
121 Structure of Red Corpuscles.—Struttura dei globuli rossi. G. Pighini.
122 *Determination of Typhoid Bacilli in Stools.—Osservazioni e critiche sperimentali sul metodo di v. Drigalski-Conradi per le ricerche dei bacilli del tifo nelle feci. E. Monti.
123 Eziologia delle diarree estive dell' infanzia. G. Volpino.
124 Pathologic Anatomy of Hemo-angio-endothelioma of Liver.—Sui cosidetti tumori endoteliali. E. Ravenna.
125 Ipernefroma maligno del fegato. M. Donati.
126 *La morfologia del sangue nel periodo catameniale (blood in menstrual period). E. Ricca-Barberis.

122. **Determination of Typhoid Bacilli in Stools.**—The von Drigalsky-Conradi technic is recommended by Koch as the most reliable and practicable means of determining the presence of typhoid bacilli in the feces. The Genoa Institute of Hygiene has been testing this technic, and it has been found that absolute reliance can not be placed on it. Positive findings, supplemented by the agglutination test, are not enough to establish beyond question that the bacilli found are true typhoid bacilli. On the other hand, negative findings with the Drigalsky-Conradi test do not positively exclude the presence of the typhoid bacilli. This test is valuable to control others, but its findings can not be accepted as decisive alone. It is possible, however, that it may be perfected and that it may then prove the ideal method for the purpose. The experiments and findings are related in detail.

126. **Morphology of Blood in Catamenial Period.**—Ricca-Barberis states that the proportion of hemoglobin in the blood commences to diminish about the seventh day before the onset of the menses, rising again to normal or above and then diminishing again with the commencement of the menstrual flow, reaching the minimum at the close and returning to normal about the sixth day after cessation of the flow. The number of red corpuscles show no or very slight changes, not at all in proportion to the variation in the hemoglobin. The percentage of polynuclears is almost always reduced, while that of the small lymphocytes is increased. The proportion of eosinophile leucocytes increases or diminishes, never retaining the standard intermenstrual proportions. These morphologic changes in the blood occur unmistakably even in women who, on account of pregnancy or for other reasons, have no menstrual discharge. The catamenial period can be readily recognized by examination of the blood alone.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

OUTLINES OF INORGANIC CHEMISTRY. By F. A. Gooch and C. P. Walker. Cloth. Pp. 514. Price, $1.75 net. New York: The MacMillan Co., 1906.

EFFECTS OF TROPICAL LIGHT ON WHITE MEN. By Major C. E. Woodruff, A.M., M.D., Surgeon United States Army. Cloth. Pp. 358. Price, $2.50. New York: Rebman Company, 1905.

PSYCHOLOGICAL MEDICINE. A Manual on Mental Diseases for Practitioners and Students. By M. Craig, M.A., M.D. Cloth, Pp. 449. Price, $4.00 net. Philadelphia: P. Blakiston's Son & Co., 1905.

DR. JESSNER'S Dermatologische Vortrage für Praktiker Heft 8 Dermatologische Heilmittel (Pharmacopœa dermatologica) Zweite verbesserte Auflage. Von Dr. S. Jessner, Konigsberg i. Pr. Paper. Pp. 96. Price mk. 1,50. Wurzburg: A. Stubers Verlag (C. Kabitzsch), 1905.

A SYSTEM OF CLINICAL MEDICINE. Dealing with the Diagnosis, Prognosis and Treatment of Diseases, for Students and Practitioners. By T. D. Savill, M.D. Vol. II. Certain Disorders; Diseases of the Skin and Nervous System. Cloth. Pp. 1,147. Price $3,00 net. Philadelphia: P. Blakiston's Son & Co. 1905.

A SHORT PRACTICE OF MIDWIFERY FOR NURSES, Embodying the treatment adopted in the Rotunda Hospital, Dublin. By B. H. Jellett, B.A., M.D. Second Edition, Revised. With five colored plates and 133 illustrations in the text, also an appendix and a glossary of medical terms. Cloth. Pp. 407. Price, 6s. 6d. net. Philadelphia: P. Blakiston's Son & Co. 1905.

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Original Articles

SIX YEARS' EXPERIENCE AT THE MASSACHUSETTS STATE SANATORIUM FOR TUBERCULOSIS.*

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BOSTON,
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In presenting the results of six years' experience in the treatment of tuberculosis, chiefly in the pulmonary form, at the State Sanatorium in Rutland, Mass., it is with pleasure and pride that we recall the fact that Massachusetts was the first state in the Union to adopt as a public enterprise methods which had been successfully used for many years abroad and later in our own country at private institutions, notably that of Dr. Trudeau at Saranac Lake, New York.

It should be remembered, moreover, that the idea of treating this disease with any hope of success in a large number of cases in a moist, harsh climate like that of New England had been regarded with extreme doubt, to say the least, among the rank and file of the medical profession. The results obtained in previous years, however, at the small charitable institution, viz.: the Sharon Sanatorium at Sharon, Mass., situated only twelve miles from the ocean and at about 250 feet only above sea-level, had attracted the attention of the earlier board of trustees of the State Sanatorium and had encouraged them, as stated in one of their early reports, to make the institution at Rutland a sanatorium (in the strict sense of the word) for the earlier cases of disease and not a mere hospital for the hopelessly ill.

The state owes a debt of gratitude for this decision to the foresight and determination of the board of trustees, both past and present, and notably to Dr. Alfred Worcester, of Waltham, Mass., now no longer a member of the board. To his enthusiasm and persistency is doubtless due much of whatever success the sanatorium has attained as a place where people can go with the hope of arresting a disease which is threatening life.

The legislature has in times past been generous in its appropriations, far more so than in some other states where earnest endeavors are being made by public-spirited men to follow the example of Massachusetts. In this respect we have little cause to complain. The difficulties which have stood in the way of those in charge of the institution, however, have been many. The fact that it was a state corporation made it of the nature of a new and great experiment, offering the vicissitudes with which great experiments are always obliged to grapple. Naturally from time to time the methods have been subjected to severe criticism, often doubtless with best intent, from those who we have reason to believe have sometimes not fully understood the precise nature, the necessities, and the difficulties of management of such an institution. While not wishing to claim immunity from liability to make mistakes, and while desiring to listen to kindly criticism, we nevertheless feel that had we not endeavored to adhere as closely as possible to the expressed wish of the trustees that only hopeful cases should be admitted and that provision should be made elsewhere for the hopelessly sick, we should have been unable to accomplish results which have attracted the attention of the public both at home and abroad, results which have encouraged other states to erect similar institutions elsewhere in the Union.

It should be distinctly understood, however, that while we have endeavored to adhere to this standard, feeling that in this way we were doing "the greatest good to the greatest number," and while our failure to accept many advanced cases had been the frequent cause of adverse criticism not only from the laity but, I regret to say, from our own profession, yet, as a matter of fact, the majority of patients admitted have been far past the incipient stage of disease, many of them having such advanced signs that there has been little hope of accomplishing anything more than a temporary amelioration of the symptoms. With these cases, however, there has at times been a most gratifying and unexpected improvement, and when we consider the means that we have at our disposal, the insufficient number of assistants necessary for the proper supervision of large numbers of patients, and the kind of cases dealt with, we have reason to be pleased at the favorable results thus far accomplished. We plead at the same time for increased facilities in our work and set our faces strongly against increasing the size of any such institution lest it become elephantine in dimensions, proportionately difficult to manage, and therefore less productive of favorable results.

To illustrate our meaning it will be well to state that at the outset, in the original bill before the legislature, provision was to have been made for two hundred patients. Owing to lack of funds, only one hundred and seventy-five could be received in the earlier months. Later, following an additional appropriation and for administrative reasons, accommodations were made for two hundred and fifty patients. For the care of these patients, most of them ambulant and able to take active exercise, we were obliged to work with but one assistant for each of the two medical departments of the sanatorium. Up to the time of the appointment of an assistant whose duties were practically confined to the examination of sputa and urine, such work was chiefly done in the laboratories of the medical schools of Harvard and Boston universities, institutions to whom we owe a debt of gratitude for helping us over a very awkward and difficult stage in our progress.

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* Read before the National Association for the Study and Prevention of Tuberculosis, Washington, D. C., 1905.

Later we again had to face the determination of our state legislature to enlarge the institution by the addition of new buildings to bring our capacity up to nearly four hundred beds, a plan which we believed to be fraught with danger to the accomplishment of best results for the reasons before mentioned. With the recent appointment of another assistant physician, we are now striving to hold to the standard originally set, although we have had to meet the fact that in order to keep the beds filled an unusually large number of well-advanced cases has been admitted. The number of assistant physicians and nurses, moreover, is still insufficient to exert the supervision necessary for the best results.

These introductory statements are made without the least desire to criticize those who, while doing their utmost in the fight against tuberculosis, may differ with us in the details of the work. We wish only to emphasize the aims and requirements of the institution, and the difficulties which have had to be met in order that others may profit by our mistakes as well as by whatever success we may have attained.

Since the opening of the sanatorium in October, 1898, up to May 1, 1905, 3,300 patients have been admitted, and there have been approximately 7,000 applicants.

The results of treatment are recorded in the following tables of percentages taken from the Eighth Annual Report, Sept. 30, 1904.

In recording results a few words of explanation are necessary. It has been the policy of our own department up to the present to use merely the term "arrested" in those cases in which all outward symptoms have ceased, such as cough, sputa containing bacilli, fever, etc., the general condition being one apparently of perfect health at time of discharge. The terms "cured" and even "apparently cured" have up to the present not been used by our department, although the condition of many of the patients would often seem to justify these expressions. As used by us thus far, the term "arrested" is equivalent to the less conservative one "apparently cured" employed by our colleagues in the other department of the Sanatorium. In deference to the wishes of the trustees, therefore, in the following quotation from the last annual report the results of the two departments are classed together.

TABLES SHOWING RESULTS OF TREATMENT.

[*From Eighth Annual Report.*]

Comparison of percentages during the first six years, up to October 1, 1904.

Year of Discharge.	1899	1900	1901	1902	1903	1904
Per cent. of "arrested" and "apparently cured" cases	34	42	46	48	49	45
Per cent. of all classes of "improved" cases	40	45	48	45	43	48
Per cent. of "not improved" cases	26	13	6	7	8	7

PERCENTAGE OF INCIPIENT CASES WHICH WERE "ARRESTED" AND "APPARENTLY CURED."

Year.	1899	1900	1901	1902	1903	1904
Per cent.	65	73	73	72	73	76

In comparing the results obtained in the last year with those of former years, we may notice the significant fact that the percentage of incipient cases which have been discharged as "arrested" or "apparently cured" has steadily increased, a proof of the importance of sending cases early in the history of disease, instead of waiting until the symptoms become more marked.

It will be noticed that the percentage of "arrested" or "apparently cured" of the total number of cases was somewhat less last year than the preceding year, which, at first sight, would seem to be discouraging. When we study the facts, however, we find reason to be encouraged. The acts of the legislature have twice increased the capacity of the sanatorium. In order to fill the 260 beds available during the last year, a larger proportion of advanced cases was admitted than before. The average length of stay, moreover, was for several reasons lessened during the last year, with a consequent increase in the number of patients admitted. Both of these facts naturally tended to diminish the relative number of cases discharged as "arrested" or "apparently cured," although the actual number of such cases was larger than before (258). Taking these facts into consideration, therefore, we feel that there is every reason for encouragement, and that by properly meeting new conditions we can increase the amount of good done to the community by the sanatorium.

SUBSEQUENT HISTORIES OF "ARRESTED" CASES IN OUR DEPARTMENT OF THE SANATORIUM UP TO MAY 1, 1905.

The subsequent histories of patients who have been at the sanatorium are naturally of great interest. The following tables have been made after painstaking endeavors to trace all those who left the institution with the disease "arrested," in our own department, which represents a majority of the whole number of patients in the sanatorium. It is still somewhat early to make very definite conclusions as to the lasting effects of the treatment, when we consider the nature of the disease; but even at this stage in the history of the sanatorium enough can be evolved to be of value. It must be remembered that we are dealing with people of very limited means, often with the poorest classes, who naturally return as a rule to less favorable conditions of living than the well-to-do. Favorable results in such cases are therefore all the more gratifying.

Although earnest endeavors are made to place people in hygienic surroundings after they leave the sanatorium, and to induce those who have lived in the city to take up a country life, yet as a matter of fact the great majority return from necessity even if not to exactly the same conditions, yet to employments which are more or less unfavorable to health. Sanatorium methods, moreover, are of course not as rigidly carried out after discharge; but it is interesting and gratifying to note that the majority persist in keeping their windows open at night and dislike any lack of ventilation. All of these facts go to prove the educational value of the institution, and augur well for the cause of preventive medicine even when our efforts to overcome the disease may not be successful in individual cases.

In regard to those from whom no replies have been thus far received, it should be stated that it not infrequently happens that former patients for various reasons will not reply to repeated inquiries, and it has been oftentimes casually discovered that they are in excellent health; so that it would not be fair to state that the lack of response is equivalent to an unfavorable reply.

From the tables it will be seen that the number of those (35) who left our department over five years ago with the disease "arrested" and are now known to be in active work, amounts to probably 70 per cent., when we take into consideration those who have not recently been heard from but who we have good reason to believe are active wage-earners still. How far the return to unhygienic conditions has been the cause of relapse and how far death may have been due to other causes than tuberculosis it is of course impossible to say with certainty. Up to May 1, 1905, of the whole number of "arrested" cases (539) discharged from our department alone up to Oct. 1, 1904, 45 have died; but the cause of death in four of these by authentic report was either accident or intercurrent disease not of tubercular nature. This would make the number of deaths of which we have certain knowledge, therefore, among the "arrested" cases only about 8 per cent. thus far.

The fact that a considerable number (63) of those who left "improved," with their symptoms still present to some degree, have since reached a condition of "arrest" is another gratifying evidence of what can be done at the sanatorium to instruct patients how to regain their health when left to their own devices under favorable conditions. It should be stated in this connection also that in this same period there were 647 cases discharged from our department in all grades of improvement but still having some symptoms. Among these have been reported 191 deaths; but the reports thus far received from those who are living show that the majority are now working.

It adds to the reliability of these statistics to know that hundreds of examinations have been made by the medical staff of past patients, who are encouraged to return regularly for purposes of comparison and counsel. The Boston Association for the Relief and Control of Tuberculosis has been very helpful to us in this work.

In trying to determine how many patients after leaving the sanatorium have made a change of residence, of climate or of occupation, it is most encouraging to note that although the majority of all the patients discharged as "arrested" have been obliged for many reasons to disregard our advice and to return to the same places of residence and occupations as before entrance, yet they are now hard at work and in good condition. A very small percentage only have made a change of climate.

This brings us to the much mooted question as to the advisability or necessity of change of climate, and it is perhaps well to reiterate statements which have been made before in other papers on the subject. We hold practically the same view which we have always had, viz., that while undoubtedly, *ceteris paribus*, a climate which presents the best opportunities for life in the open air with the maximum of sunshine is best for the consumptive, and that the chances of relapse there are smaller, yet for hundreds and thousands of those who for many reasons cannot go far away we have certain knowledge that a large percentage can regain and keep their health by comparatively simple methods near home. We know also that while undoubtedly thousands of patients who have gone to distant health resorts have done well, there are some who have lost ground there and who upon return have again improved. In short we do not sympathize with what we deem the equally sweeping assertions of those who maintain that it is no longer necessary to send patients far away and those who insist on the other hand that an entire change of climate is the *sine qua non* of success.

SUBSEQUENT HISTORY OF PATIENTS ON DR. BOWDITCH'S SERVICE UP TO MAY 1, 1905.

	Year of Discharge.						
	1899	1900	1901	1902	1903	1904	Total.
Number of patients discharged with "disease arrested"..	35	56	85	90	132	141	539
Number of patients now in good health and working.	18	39	60	65	105	113	400
Number of patients who have not replied to letters lately	2	9	8	8	10	17	50
Number of patients who can not be traced..........	4	1	2	1	1	0	9
Number of patients in whom symptoms have returned.	2	2	9	8	4	11	36
Died*	9	5	11	8	12	0	45
Patients left sanatorium "improved," but now reached condition of "arrest"....	9	5	14	7	15	13	63

Of those who died in the class of 1899, all returned to the same residence, except one, who went from Springfield to Boston and one, who went from Boston to Colorado.

All had returned to the same occupations, except one girl, who married and had a child.

Of the 18 at work now, all returned to the same residences, except 2; 1 went from Boston to Colorado, and 1 from Worcester to a Canadian town.

All returned to the same occupation as before entrance.

All but 2 of the 9 "arrested since discharge" cases bettered their residences, 2 of them being in Colorado.

In the class of 1900, of the 7 patients who died or relapsed, 2 changed occupation or residence, and 1 changed climate.

Of the 39 patients who remain well, 13 changed occupation or residence and 2 changed climate.

In the class of 1901, of those who relapsed (20) 1 changed climate and occupation; 2 died from causes other than tuberculosis.

Of those who are in good condition (60),
10 made a change of residence.
3 made a change of climate.
6 made a change of occupation.

In the class of 1902, of those who relapsed (16),
1 changed climate.
3 changed residence.
2 changed occupation.

Of those who are now in good health (65),
3 changed climate.
12 changed residence.
7 changed occupation.

METHODS OF TREATMENT.

It will be impossible in this paper to do more than give the general outline of methods of treatment at Rutland. For the most part we employ what are recognized now as the essentials in all sanatoria for tuberculous patients, viz.: the greatest amount possible of fresh air, good food, judicious exercise and general supervision as far as is possible in order to guard against the mistakes which arise through ignorance in whatever direction.

As to the use of any one specific remedy, we can frankly say that we have thus far found nothing to equal the effect of the so-called hygienic treatment, although we have at times experimented with certain vaunted remedies with negative results. In the use of tuberculin we have held a conservative position, doubtless an unwarrantable one in the minds of some of its advocates. We can say, however, that in taking this position it has been with no wish to shut our eyes obstinately to what shall be proved of undoubted efficacy, but because of honest doubt and in order to be better able to make comparisons after a reasonable experience with one method. Deeply impressed if not wholly convinced yet by the statements and experience of those for whose opinions we have great respect, we have in many cases used tuberculin for diagnostic purposes, with the result that while believing it to be not an infallible test and that error may arise, we nevertheless believe it has at times been of much value in determining the nature of doubtful cases, and that in the future, with the possibility of establishing a definite standard in the preparations, it can be of still greater service.

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* Four have died from causes other than tuberculosis.

Of its use therapeutically, about which so much is said and written *pro* and *con*, we can say that recently, in a few cases which have for several months seemed to remain in *statu quo* under the usual hygienic methods, we have begun its use in accordance with the recommendations of its advocates. Our experience thus far, however, has been too meager to warrant any positive opinion. We can certainly say that we have seen no harm come from its use, and in one or two cases the improvement in symptoms has encouraged us to pursue our investigations still farther.

One word in reference to exercise. One great difficulty in a large sanatorium like that at Rutland is to provide sufficient and healthful amusement to keep the patients content. With men especially, many of them in vigorous condition, chafing at confinement, we allow, in carefully selected cases, a certain amount of freedom of exercise which on general principles some would think unwise. Believing that the moral effect of outdoor games will outweigh the possible deleterious effect of active exercise, we have allowed some of the patients who are approaching a state of arrest of disease to indulge at times in baseball and other games of a less active nature. It should be distinctly understood, however, that these are the exceptions to the general rule. While an occasional mishap may have occurred, we believe that much less evil has come from this than would be naturally supposed at first thought. At the same time there is a marked beneficial effect on the mental condition of the patients in allowing them this comparative freedom. Incidentally it should be said that in properly selected cases we thoroughly believe in the good effect of moderate calisthenic exercises for the chest, and disagree wholly with those who make the (to us) sweeping assertion that every tubercular chest should be kept in as absolute a state of immobility as possible, no matter how slight the amount of disease. That rest of the diseased organs, as far as it is possible to obtain it, is required for cases of very active trouble, we believe to be true; but we also maintain from experience that expansion of the lungs at regular intervals, where the disease is quiescent, is productive of excellent results.

What then can we say of the wisdom of establishing a state sanatorium after these six years of experience at Rutland? Have the results justified the original outlay, and can we urge other states to do likewise? In our opinion there can be but one answer to this question, and that in the strongest affirmative. No one who has studied the question of tuberculosis and who has carefully and conscientiously followed the working of methods for relief of the victims can fail to be struck forcibly by what has been already done at Rutland, first from the humanitarian point of view, and second from the utilitarian side of the question. As case after case comes before our eyes and we watch the gradual change in aspect from one of disease and invalidism to that of health and vigor, and contrast present conditions with the wretched hopelessness of former years, can we, if we have a spark of human sympathy in our breasts, fail to rejoice that we now can hold out the hope of renewed health to many of those who otherwise from lack of means would be practically doomed to die a lingering death?

From the humanitarian point of view alone we feel that the Rutland Sanatorium has given already sufficient justification of its existence in spite of the inevitable discouragement and sense of failure which must come in a certain number of cases. When we consider the utilitarian side, can there be any doubt, when reading the large percentage of those who have returned to their homes and have become active wage-earners again, that the money expended has been fully repaid in the renewed vigor and usefulness of large numbers of our citizens?

It has been, moreover, often said, but the truth cannot be emphasized too much, that quite apart from the good done to the individual patient, stands the far-reaching educational effect of such institutions upon the community. This cannot be reckoned in figures, but that it is a great power for future good no rational person, if he has had even small experience, can deny.

Thus we give the results of our personal experience. That the Massachusetts institution may be but the small beginning of a similar movement all over our country in the fight against tuberculosis is the earnest wish of everyone connected with the Rutland Sanatorium.

WHEN NOT TO OPERATE FOR APPENDICITIS.*

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The profession has spent a number of years discussing when to operate in appendicitis and has arrived at a definite conclusion concerning most cases, but there still remains a class of cases in which there is a decided difference of opinion.

In the past few years the extremists have been losing ground. It is some years now since I have met a medical man who claimed that medical treatment is the best for appendicitis and that operations should not be performed. On the other hand, I am not now personally familiar with the work of any surgeon who says that every case of appendicitis should be operated on no matter when the diagnosis is made, although several of my colleagues held that opinion a few years ago, and I was inclined to believe then that operation at all times and under all conditions should be the rule. At that time we had just learned that by operating on acute appendicitis early we could save nearly all cases. We then theorized that when an operation was so good in one class it must be in all classes. I now believe that our theory was based on false premises, because experience, which is always better than theory, has taught me that there are conditions under which we should not operate for appendicitis. Our extreme practices have resulted in good to our fellow man, although they were pretty hard on him for a time, because we have learned that in appendicitis, as in most things, there is a happy medium, and that there are times when not to operate.

There are still a few exponents of this operative extreme, but they are condemned by their own statistics and their own discussions. Their statistics show a much higher mortality rate than those of surgeons who exercise some judgment in their selection of cases for operation. Surgery deals with human life and it can not be done by fixed rules. If we could say we must always operate, experience would be of little value. All that would be necessary would be to learn the rules. A surgeon, of all men, should avoid fixed rules and should exercise reason and judgment in every case. He should base his opinion on his own experience, on the experience of others and on the conditions found in a given case, for no two cases are alike. A surgeon should be brave and should operate when he concludes that operation offers his patient the best chance, no matter how desperate that chance, but he has no license to be foolhardy because it is the patient's life that is at stake and not his own. One who operates for a record does not always have his patient's best interest at heart.

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* Read before the Minnesota State Medical Society.

All surgeons and most physicians agree that chronic, recurring appendicitis should be operated on in the interim. There are still a few physicians who tell their patients after an acute attack that they are well and need no operation. How they can do so conscientiously is beyond comprehension, because they know that a goodly number of those patients do have recurrences, and some of them with fatal results, while on the other hand, operation in the interim by experienced surgeons is almost without mortality. Many surgeons of large experience can show an unbroken record. My first operation in the interim was performed Feb. 11, 1893, and since that time I have operated hundreds of times without a single death. One patient from Wapheton had chronic appendicitis when I operated on him, but he came to me with chronic obstruction of the bowels, for which a resection of several inches of bowel was made with a fatal result. Patients who have had an acute attack resulting in abscess are sometimes told that they need no operation because the appendix has sloughed away, but when the surgeon operates on these patients he always finds an appendix. It is sometimes abbreviated and shrunken, but still big enough to cause future attacks. At my first operation I was completely disgusted because after cutting my patient both lengthwise and crosswise I found, behind the ascending colon, an inoffensive looking, shriveled up remains of what had been an appendix. I felt that I had subjected my patient to a very grave operation without corresponding benefit. The outcome, however, was eminently satisfactory. Before the operation he had had frequent dangerous attacks of "perityphlitis" with abscess, and since the operation he has been in perfect health.

Because the interval operation is so safe it does not follow that it is always safe to wait for it, for the patient may die before reaching that period. It has been very aptly said that an interval operation is a good thing to recommend in the interval.

I wish to call particular attention to the fact that many people suffer from chronic appendicitis who have never had an acute attack. These patients should be all operated on because the operation is perfectly safe, and because they are almost certain sooner or later to suffer an acute attack with all its attending dangers.

Both physicians and surgeons agree that when a localized abscess is formed an operation is indicated.

All surgeons of large experience, and many physicians agree that under proper conditions every case of acute appendicitis coming under observation within the first forty-eight hours should be operated on at once. I hope and believe that the time is not far distant when this view will be universally accepted. Under proper conditions these operations can be performed with less than one per cent. mortality, and that is better than can be accomplished by any other method. When this rule is adopted by all appendicitis will have lost most of its terrors, and there will be no ground for controversy except in cases where the proper conditions can not be complied with and where the diagnosis has not been promptly made. Fitz, Osler and other eminent internists are teaching this doctrine now, and it is to be hoped that their influence will convert the family physicians throughout the world, because they see these patients first. When a case goes beyond this stage it is the fault of the patient or his physician, and theirs is the responsibility. The patient's unwillingness to accept an operation does not relieve the physician of his responsibility unless he has given the patient his positive opinion in favor of an operation. It is not the province of the physician or surgeon to ask the patient what he wants, but to advise him what he needs. Fortunately, the laity are so well educated in this matter in most communities that operation is rarely refused when earnestly advised. In communities where early operations are not popular it is the fault of the physicians in that community who have been advising late operations only, and then when they thought the patient was about to die. The surgeon can not say to the physician "bring your appendicitis cases to me any time and I will cure them," but he does say most emphatically, "make your diagnosis early, bring your patient within forty-eight hours of the beginning of the attack and he can be cured ninety-nine times out of one hundred."

The proper conditions on which I wish to lay great stress are hospital facilities and an experienced surgeon. Without these I believe early operations are contraindicated. Fortunately, this is a day of hospitals and surgeons, and there are very few who can not comply with these conditions. If every physician felt it his duty to operate whether he had had experience in abdominal surgery or not, or if it were considered proper to operate everywhere, the mortality would be greater than if no operations were performed.

As a rule the early diagnosis is easy and should be made by anyone competent to practice medicine. That familiar train of symptoms can scarcely be mistaken. Pain very commonly beginning in the epigastric or umbilical regions and gradually extending to the right iliac region; tenderness often all over the abdomen at first and gradually settling down to the region of the appendix; rigidity of the muscles on the right side; vomiting. There are a few cases, however, in which the symptoms are masked and in which a positive diagnosis is difficult or impossible. When the patient is very ill and what few symptoms there are suggest appendicitis, an exploratory opening should be made through the right rectus. The pernicious habit of administering an opiate for every case of bellyache has caused the loss of many lives by obscuring symptoms. Every attack of abdominal pain should suggest the possibility of appendicitis, or some other serious condition.

When appendicitis is complicated by typhoid fever, pneumonia, severe la grippe, acute nephritis, or other conditions which contraindicate an anesthetic, operation should be avoided as a rule, but even under these conditions a localized abscess should be opened under local anesthesia.

When a patient is evidently moribund he should not be subjected to operation, because it does him no good and it does the cause of surgery harm.

I believe that when a patient is not brought to the surgeon's notice until he is evidently convalescing from an attack, he should not be operated on, but

Nature should be allowed to complete her work; and that he should be *carried over to the interim and then* operated on.

Surgery can not be scientifically done by the calendar. We can not fix a rule that on a certain day we may operate for appendicitis, and on another day we must not. The nearest we come to it is at the beginning where the concensus of surgical opinion based now on a vast experience is that the first forty-eight hours of the attack is the safety period. Within this period the infection is usually limited to its *original seat* and it can be *completely removed.* The wound can be closed and all the dangers and annoyance of drainage avoided.

There is a time, beginning with the third day of an attack of appendicitis, when surgeons begin to differ as to whether we shall or shall not operate. We can not hope to settle this vexed question to-day, for it is doubtful if it ever will be definitely settled, but we can contribute our mite in the way of discussion. When I am called to see a case of appendicitis on the third, fourth or fifth day of the attack and the patient is evidently *doing well, I do not operate because I have learned that* when a patient is doing well at this time Nature is doing her part, and the rule is that the patient will either go on to convalescence without operation, or that a localized abscess will form, making an operation a safe procedure. The danger of a case going wrong under these conditions has been greatly exaggerated. Over zealous surgeons very greatly underestimate Nature's work in these cases. If we could operate as safely at this time as we can in the first two days I would gladly do so, but I tried it a few years ago and failed to improve on Nature's methods, and in this practice I have a host of good company. I am sure that with my improved technic I could do much better now than I did then, but I am too well content with Nature's work under these conditions to want to interfere. It is easy to understand the difference between the early and late cases. Under ordinary conditions an infection does not spread beyond its original seat within forty-eight hours, and the surgeon can remove it, making a *complete operation*, but after this *period* the infection has had time to spread and for the first few days Nature has not had time to complete her *lines of* defense. If the surgeon "butts in" at this time he interferes with Nature's work, and is very liable to fail to take her place successfully, because he can not surely remove the infection and he is liable to spread it.

When the attack has been going on for three, four or five days, and the patient is doing badly, the natural instinct of the surgeon is to interfere. He feels that Nature's efforts have failed and that the patient's only hope is in operation, but it has been demonstrated by Ochsner and his followers that immediate *operation* is not his only hope, and if statistics are worth anything they have demonstrated that his chances are better to wait. I am still at sea in these cases. I decide each case on its own merits to the best of my ability, and operate or wait as seems to me best at the time, and no matter what course I pursue I sometimes wish I had chosen the other one.

When I am called to a distance to see a patient within the first few days of the attack, I always feel relieved when the attending physician tells me he wishes to consult with me as to the advisability of an operation, for there is always a chance for an honest difference of opinion. It is embarrassing to both surgeon and physician when the former is called to perform an operation and feels it his duty to advise against it.

The so-called "Ochsner method" has been so generally misunderstood and misapplied that, regardless of its real merit, it has done infinitely more harm than good. Dr. Ochsner is an earnest advocate of early operation for appendicitis. He does not recommend starvation and lavage for appendicitis, but he does recommend them for a spreading peritonitis due to a neglected appendicitis. The treatment, or rather the neglect, of early cases of appendicitis by starvation and lavage has caused the loss of many lives that might have been saved by early operation.

There remains for our consideration that grave class of cases in which the patient has a so-called general peritonitis. I say "so-called" advisedly because it has been demonstrated that a general peritonitis is, to put it mildly, a very rare condition. The patient's abdomen is distended, is hard and boggy to the touch, his pulse is high, he gives a history of having had a fluctuating temperature with possible chills and sweating; he is septic and has been so for some time. I can not understand the mental processes of men who report ten, twelve and sixteen cases of this class in which they have performed the radical operation with a mortality of 100 per cent., and who still advocate the radical operation. These patients do not all die when treated differently. I can still remember going from my own college to the University of New York to hear Professor Loomis deliver his famous lecture on the treatment of peritonitis by four grain doses of opium. His patients did not all die. A few years ago I did perform the radical operation on a very few of these cases, and they all died promptly. Since that experience I have been content to open abscesses locally, and to carry out to a greater or lesser extent the plan of treatment so admirably set forth by Dr. Ochsner, and I have succeeded in carrying a number of these patients over to a safe interval operation. That old dictum so forcibly laid down by the late Dr. Sayre, that the presence of pus always demands free incision, has been overworked. *The mere presence of pus is not the point at issue.* The question is whether the septic material is being absorbed so rapidly as to overcome the resisting powers of the patient. We all know that Nature does often take care of large quantities of pus, and this is particularly true in the peritoneal cavity. In face of this fact what right have we to perform an operation with such an appalling mortality? What surgeon is present who has not removed tubes from the pelvis which had contained pus for months and sometimes for years? What one among you knowing of the presence of pus in the tubes during the acute stage will not wait for a safe operative period? You often drain through the vagina during the acute stage, but you do not undertake the radical operation at that time.

During the past few months I have had but five cases of appendicitis of this extreme type, one referred by Dr. Cleveland of Osakis, Minn., two by Dr. Ridgway of Annandale, Minn., one by Dr. Cutts of Forest City, Minn., and one by Dr. Tarbell of Watertown, S. Dak. These patients were all treated expectantly, and are all alive today. Had I performed the *radical operation* on them, judging from my former experience, they would all have died. I am morally certain that some *of them would.*

In Dr. Cleveland's case no operation was performed for nearly three months, when I performed an interval operation successfully. In one of Dr. Ridgway's cases several abscesses were opened locally and fecal fistulæ formed. I operated later, removing the appendix and closing the fistulæ successfully. His other patient, a seventeen-year-old girl, had a most extensive peritonitis, for which I drained through the vagina, evacuating immense quantities of pus. She is now in apparent good health and expects soon to have her appendix removed. Dr. Cutt's patient had pus seemingly in every corner of his abdomen. I opened first high up on the left side and later over the appendix. He was at last report, in April, in good health but had suffered one mild recurrence and still has a fistula. His foolish parents, who are responsible for his former bad condition, have so far prevented him from having his appendix removed. Dr. Tarbell's case is still in bed most of the time, but improving. I have opened several abscesses, and am waiting for the proper time to remove his appendix.

To recapitulate: I believe that there are times in appendicitis, as in all other surgical diseases, when operation is not the best treatment. I believe that the radical operation should not be performed, first, when the patient is evidently moribund; second, when the patient is evidently convalescing; third, when certain grave complications are present; fourth, in the midway cases beginning with the third day when the physician and surgeon are in doubt; fifth, in the extreme cases of suppurating peritonitis.

In conclusion I wish to state that some of these opinions concerning these late cases are in all probability not final with me, and that should I have the privilege of reading to you again on this topic a year or more hence, the chances are that I shall have modified them. I hope to die before I reach a point where I am no longer open to conviction, for I agree with Emerson that a man who never changes his mind probably has no mind to change.

THE CIRCUMSTANCES AND TREATMENT OF BRIGHT'S DISEASE.

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THE MODERN CONCEPTION OF BRIGHT'S DISEASE.

The determining feature of Bright's disease is high arterial tension, with resulting cardiovascular changes. The latter lead to nutritional disorders in various parts of the body, and particularly in those organs that are supplied by end-arteries, viz., the kidneys, retina and brain.

The old idea that in Bright's disease the kidneys are always primarily involved, and that as a result of renal inadequacy certain toxic products are retained that produce the cardiovascular changes and the eye and brain symptoms, is untenable, for many cases of Bright's disease occur in which the kidneys are not involved until very late in the course of the disease, long after cardiac hypertrophy, retinitis, albuminurica and brain symptoms have appeared.

True, there are many infections and intoxications of an acute character in which the kidneys are primarily affected. Most of these nephritides, however, run their course without any involvement of the heart, the arteries, the retina or the brain. If occasionally, late in their course, degenerative changes about the heart and arteries, as well as in many other organs of the body, occur, then these secondary events must be considered due to the general toxemia, that is, to the inevitable result of advanced degrees of renal insufficiency.

These, however, are not cases of Bright's disease. The underlying causes and, above all, the sequence of events are different.

It is unfortunate that the name Bright's disease is retained at all in our medical nomenclature, for what we understood by this term and what Richard Bright originally described are two very different things.

It is still more unfortunate that the terms Bright's disease and nephritis are so commonly employed synonymously. This is radically wrong, for Bright's disease in the modern sense is a systemic disorder that usually produces nephritis, but does not invariably do so. and nephritis, while often due to Bright's disease, may also be due to a great many other causes. It is not tautology, therefore, by any means, to speak of the nephritis of Bright's disease.

THE CAUSES OF BRIGHT'S DISEASE.

The high arterial pressure that ushers in every case of Bright's disease, in all probability, is produced by circulating toxins. The latter, so far as we know, are derived from the abnormal degradation of albumins either in the intestine or in the tissues at large.

A number of pressure-raising principles have been isolated from putrid bowel contents. We also know that many of the intermediary products of metabolism can raise blood tension.

A deranged bowel function always leads to the abnormal disassimilation of albumins, chiefly because putrefactive bacteria gain unopposed sway. The toxic albuminoids and alkaloids generated in this way flood the liver channels, where they should normally be arrested or disinfected. For a while the hepatic cells can withstand the stream of toxic matter that circulates around and through them and can properly exercise their disinfecting properties; but an overwhelming mass of putrefactive material flooding them at one time, or small quantities of putrid excrement irritating them continuously, must needs impair their function and render them inadequate to protect the organism as a whole from poisoning. When this occurs, intestinal toxins filter through into the circulation beyond, and there can exercise their deleterious effects on the heart, on the arteries, and also on those organs that chiefly supplement the disinfecting function of the liver by eliminating poisons, namely, the kidneys.

Hepatic insufficiency produced in this way also leads to the incomplete elaboration of the aforementioned intermediary products of metabolism that reach the liver in the general circulation as poisonous purin bases, ammonium salts, etc., and should leave the liver more highly oxidized, as innocuous uric acid, urea, etc. When the liver cells are inadequate to produce this conversion, then these intermediary bodies are returned unchanged to the general circulation, and thus cause autointoxication. That some of these bodies can produce the cardiovascular changes of Bright's disease and some of the renal changes was shown by me in 1900.[1]

Another important result of hepatic insufficiency is perversion of the physical and chemical character of the bile. Instead of flushing the bile channels in a broad stream, the bile sluggishly oozes through the hepatic capillaries. The thick and viscid character of the bile favors diapedesis of poisonous bile ingredients from the bile channels into the blood capillaries and produces clogging of liver channels, with pressure on the hepatic cells and on the afferent blood capillaries that nourish them; as a result, the function of the liver cells is still further impaired and self-intoxication favored.

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[1] Croftan: "The Rôle of the Alloxuric Bases in the Production of the Cardiovascular Changes of Nephritis." Am. Jour. Med. Sciences, February, 1900.

Finally, the absence of the proper quantity of normal bile from the intestine deprives the organism of its most important antiseptic secretion, so that intestinal putrefaction increases and a vicious circle is closed.

THE TREATMENT OF BRIGHT'S DISEASE.

General Considerations.—Bright's disease, as shown above, is a toxemia, presumably of intestinal and, by implication, of hepatic origin, involving, primarily, the cardiovascular apparatus and, secondarily, many organs of the body, including the kidneys.

Causal treatment, therefore, must be directed toward the digestive disorders that, in my opinion, underlie most cases of the disease. There are other cases, I believe, which are due to obscure metabolic perversions that we do not understand. These are more difficult to handle, because we have nothing tangible to attack; for who can successfully combat a tissue anomaly that is hereditary in character and in which an obscure neurotic element plays a commanding rôle?

Whereas, in the cases of gastroenteric or of hepatic origin, the prognosis is not bad if early attention is given to the digestive disorders; the prognosis in the second variety of cases, in the obscurity of our present knowledge, is always doubtful, and all treatment is of necessity symptomatic.

Symptomatic Treatment.—In Bright's disease this is not, however, the conventional treatment of the kidneys, but the treatment of the heart and arteries. When the nephritis is established, it becomes necessary, of course, to counteract the renal inadequacy and its sequelæ.

The treatment of the common cerebral and retinal symptoms is synonymous with the treatment of the heart and arteries.

General Treatment.—The treatment of the patient as a whole, i. e., the maintenance of the general nutrition by mathematically regulated feeding, and by the avoidance of those great perverters of all functions, nervousness, worry, depression and fear, is naturally also of paramount importance.

It is not my intention to discuss all the elements in the management of a case of Bright's disease; I merely wish to emphasize some of the therapeutic means which have been evolved from the newer reasoning outlined above, and which have proved useful in my hands.

The Prevention of Intestinal Putrefaction.—Sterilization of the human intestine with its thirty feet, more or less, of warm, moist culture medium is manifestly impossible; nor is it desirable, for many of the micro-organisms that normally abound in the bowel aid the enteric ferments in the disassimilation of the food and produce certain physical changes in the bowel contents that favor the act of defecation.

The human intestine is practically sterile at birth; later bacteria appear in the bowel contents, some of them pathogenic. Against the latter the organism normally protects itself by very efficient means; when these measures become inadequate, artificial intestinal antisepsis is called for.

The object of intestinal antisepsis, so-called, is not, therefore, to free the bowel from bacteria, but to prevent the pullulation of certain pathogenic species and to destroy their poisons.

Remedies employed to this end may become operative in two ways: They may either act chemically by direct contact or they may act physiologically by stimulating the natural defenses of the organism to greater activity.

Most of the drugs employed as intestinal antiseptics fulfill both indications, inasmuch as they possess not only germicidal properties, but also act as hepatic stimulants. As the liver cells possess the power of arresting and of disinfecting many bowel poisons, and as the bile is a germicide, any remedy that irritates and causes increased activity of the hepatic cells and, by inference, acts as a cholagogue may be considered an intestinal antiseptic of the second variety.

Chief among the remedies recommended as intestinal antiseptics are certain metallic salts, the bile acids and certain organic peroxids. It is necessary, of course, that these remedies when given in doses sufficient to check intestinal putrefaction should be non-irritating and non-poisonous. For this reason I prefer the sulphocarbolate of zinc to other metallic salts (mercury, lead, silver, copper), and sodium glycocholate to the free bile acids. A variety of organic peroxids under various trade names are on the market, and I consider them useful.

Intestinal putrefaction may be considered checked when certain bodies that we know to be formed from the putrefactive disintegration of albumin disappear from the feces and from the urine (abnormal degradation products of the fats and carbohydrates play a subordinate rôle in autointoxication). Chief among these bodies is a variety of sulphur compounds and a complex group of substances that contain the aromatic radicles that are split off from putrefying albumin.

For clinical purposes it is sufficient to study the sulphids of the feces and the aromatic sulphates (with indican as their prototype), the compound glycuronates and the compound glycocolls of the urine.

I give the intestinal antiseptics in small doses (sulphocarbolate of zinc, one-half grain; sodium glycocholate, one grain; the organic peroxids, one grain), at frequent intervals, together with about twenty grains of bismuth subnitrate, in the twenty-four hours. The latter is given merely as an indicator of the presence or absence of sulphids (sulphuretted hydrogen or its salts) from the feces. H_2S or its alkali salts form black bismuth sulphid, and when the intestinal antiseptic is given in sufficient quantity to check the putrefaction of albumin, then no bismuth sulphid is formed and the stools are not colored black.

It will be found, in most cases, that when the stools retain a light color, despite the administration of bismuth, the indican of the urine and the other aromatic urinary ingredients will also disappear or become greatly reduced.

The proper dose, then, of the above-named intestinal antiseptics is enough to prevent blackening of the stools after the ingestion of bismuth subnitrate and enough to cause the disappearance from the urine of aromatic bodies.

The selection of a diet containing the proper quantity and the proper kind of proteids, fats and carbohydrates to fit the peculiarities of each case of chronic intestinal putrefaction is, of course, also of prime importance, but can not be discussed within the narrow frame of this article.

The Use of Cardiac Tonics and of Vasodilators.—Digitalis in small doses (i. e., one drop of the tincture,

t. i. d.) renders the heart less susceptible to the disturbing stimulation of circulating toxins. In this sense it slows and regulates the heart beat without unduly prolonging the diastole and without causing too energetic systolic contractions. It can not, therefore, do harm by overstimulating an organ that requires rest. Such small doses may be given with impunity for months without impairing the power of the heart to respond to large doses in emergencies.

For strengthening the heart in Bright's disease when myocardial changes threaten, the Schott exercise treatment is very useful. It is infinitely superior to the use of large doses of digitalis or of any other so-called cardiac tonic. It is often astonishing to witness the improvement in the action of the heart, and the coincidental decrease in the albuminuria when this exercise treatment is judiciously administered.

Nitroglycerin or, better, erythrol tetranitrate, a preparation that seems to grant a prolonged vasodilator effect, is the orthodox remedy to reduce the blood pressure. Patients may be kept under the influence of these drugs for long periods of time. Continuous vasodilatation, by causing a fall of blood pressure in the kidneys, reduces the albuminuria and enables the renal epithelium to regain its tone and to resume its function.

Hot baths, rest in a warm bed, judicious life in a warm, dry climate are all useful measures, because they favor prolonged dilatation of the superficial blood vessels, and hence reduce the arterial tension and rest the heart.

FOUR NEWER POINTS IN THE TREATMENT OF THE NEPHRITIC MANIFESTATIONS OF BRIGHT'S DISEASE.

1. *The So-called Surgical Treatment of Bright's Disease.*—Splitting of the kidney capsule, or decapsulation of the organ, for the cure of Bright's disease is altogether irrational. The temporary relief of tension may improve the blood supply to the kidneys, and hence restore for the time being some functional activity to diseased epithelia; and this improvement in the renal function may become manifest by a reduction of edema, by a transitory decrease in the albuminuria, the disappearance of formed elements (casts, etc.) from the urine, and an increase in the excretion of solids and of water.

Bright's disease, however, as we have seen in the preceding paragraphs, is a systemic disorder, and the nephritis is merely one of its symptoms. Any treatment of the kidneys alone, whether surgical or otherwise, is therefore purely symptomatic, and can in no sense be regarded as curative. One might as well amputate the rose spots in typhoid fever and expect to cure the disease.

It is not surprising to find, therefore, that no true case of Bright's disease has even been permanently benefited by operations on the kidneys. The procedure is mentioned in this place merely to be condemned.

2. *Liberal Feeding.*—In acute forms of nephritis underfeeding, or even starvation, of the patient not only is permissible, but is good practice, for the smaller the amount of excrementitious material the kidneys are forced to eliminate, the more are they spared, and the more rapidly can they resume their normal functions.

One may say, in a broad sense, that the daily amount of feeding, expressed in caloric values, should be inversely proportionate to the presumable duration of the nephritis. Hence, the more chronic the nephritis, the more nutritive should be the diet; and as the nephritis of Bright's disease is the most chronic variety with which we have to deal, a patient with this disease should receive daily the full caloric value in his diet that is required to maintain nutritive equilibrium, i. e., at least thirty calories per kilo of body weight.

There is no compelling reason why a mixed diet should not be given in these cases. It is ridiculous to postulate that the albumin of the food will reappear as such in the urine, and that the more albumin the patient eats the more should he excrete—though this prejudice still exists in the minds of many. A diet containing variety should be carefully selected and only those articles excluded that lead to the formation of urinary end products that are eliminated with difficulty, and hence can be assumed to irritate the kidneys when these are diseased. The details of this selection can not be given within the narrow scope of this article.

MILK DIET IN THIS DISEASE.

A few words in regard to the popular method of feeding sufferers from Bright's disease with milk alone.

In acute forms of nephritis this is good practice; in chronic forms, however, and in particular in the nephritis of Bright's disease, the only argument in favor of an exclusive milk diet administered for long periods of time is the fact that such a régime reduces intestinal putrefaction, and hence removes a prolific source of renal, hepatic and cardiovascular irritation.

As against this, as I have pointed out elsewhere,[2] the following five arguments can be brought forward:

1. In order adequately to nourish a patient with milk, enormous quantities must be given, and where enough milk is given the albumins are much in excess (200 to 300 gr. instead of the normal 100 gr. in the 24 hours); this imposes an excessive task on the kidneys, and renders the restriction of albumins that is attempted by the withdrawals of meats fictitious.

2. The administration of large quantities of milk causes flooding of the heart and arteries with water, and hence must act deleteriously on an already overtaxed cardiovascular apparatus.

3. Milk is deficient in iron, and an exclusive milk régime, if carried out for long periods of time, leads to deficiency of hemoglobin and all the dire results entailed thereby.

4. The constant dilution of the gastroenteric secretions is harmful.

5. An exclusive milk diet must needs sooner or later become monotonous and distasteful, and hence deprive the patient of the psychic stimulus of appetite that is all-important for proper digestion.

3. *The Restriction of Liquids.*—It is a common practice to give much water in all forms of nephritis (witness the many waters on the market that are sold as "cures" for Bright's disease!).

Regarding Bright's disease as a primarily cardiovascular affair, it is evidently bad practice to flood the heart and arteries with liquid, and hence to augment the blood volume, to increase the arterial tension, and, of necessity, to overwork the heart. All the liquid that is poured into the stomach must needs pass through the heart and arteries in order to reach the emunctories of the body.

The chief advantage postulated for abundant water drinking is that it "flushes out the kidneys."

This idea is wrong in most cases of nephritis; for in acute and in subacute forms of the disease water passes the kidneys with difficulty, so that they spontaneously stop eliminating it as soon as they become diseased, and they do not resume the copious elimination of water until they are recovering. Hence, to try to force water through the kidneys is to irritate them when they should be kept at rest.

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[2] Croftan: "The Dangers of an Exclusive Milk Diet," Medicine, May, 1903.

In late stages of chronic types of the disease, it is true (and this applies to the nephritis of Bright's disease), polyuria is common, but here the urine contains few solids and few renal elements, and there is practically nothing to "flush out."

Abundant water drinking, therefore, as a rule, is irritating to the kidneys and injurious to the overtaxed cardiovascular apparatus. In acute and subacute forms of nephritis it is usually dangerous; in most chronic types it is at least superfluous. I consequently adhere to the rule, broadly speaking, of gauging the water intake by the water output—carefully considering all the while the particular requirements and the changing features of each case. I rarely see the necessity for forcing the ingestion of water, and I am always more inclined to restrict liquids.

It is popular to "sweat" nephritics, and at the same time to force these patients to drink much water, the object presumably being to rid the organism, via the sweat glands, of toxic excrements that the kidneys fail to eliminate. There is, however, very little evidence to show that the sweat of nephritics contains poisonous bodies; it does contain some urea, some fatty acids, some sodium chlorid, and, above all, much water. The chief advantage of sweating nephritics is, therefore, to rid the organism of some of the surplus water that is circulating, and of which the kidneys can not get rid. To sweat a patient, on the one hand, and to give him abundant water, on the other, is, therefore, irrational: for to do this is to neutralize the good effects of the sweating, to irritate the kidneys when they should be allowed to enjoy the rest granted them by the elimination of water through the sweat glands, and again to overtax the straining heart and arteries.

4. *The Withdrawal of Chlorids from the Food.*—In nephritis the elimination of sodium chlorid is usually reduced. It is retained in the tissues, and in order to remain there in a solution that equals the molecular concentration of the blood and tissue juices, it must draw water from the blood (the less concentrated solution) into the tissues (the more concentrated solution) by a process of osmosis. This idea may in part explain the edemas of nephritis.

On the basis of this theory, the ingestion of sodium chlorid, i. e., common table salt, has been restricted in order to enable the kidneys slowly to eliminate the retained chlorids. If the theory were correct, the edemas should disappear.

As a matter of fact, in common with many others, I have repeatedly seen nephritic edemas disappear (and, incidentally, albuminuria decrease) when the chlorids were excluded from the food, and reappear when salt is again given.

As 100 grains of common salt require about three pounds of water to form the proper physiologic solution (i. e., a solution exercising the proper osmotic pressure) in the body, any sudden increase in the weight of a nephritic patient, other things being equal, may mean salt-retention and hence water-retention (deep edemas), and should be an indication, tentatively at least, to withdraw the chlorids from the food.

100 State Street.

A STUDY OF PROPRIETARY[1] MEDICINE ADVERTISEMENTS.*

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In a previous paper[2] I called attention to the most prevalent names of diseases, ailments, and symptoms found in the advertisements of patent medicines in the newspapers, and to their significance. Since then I have traced the subject through a number of medical journals and I now desire to give a few notes on the subject.

If we take a broad view of the matter we will find no abrupt transition between the advertisements of patent medicines in the newspapers and those of proprietary remedies in the medical journals. Although the extremes are marked, yet they shade off into each other, in fact they overlap. Some newspapers have a higher standard than some so-called medical journals; there is less quackery. Lately we have heard much of medical journals decrying advertisements of patent medicines in the newspapers and yet they make no attempt to purge their own ranks. If we say the public is gullible and is induced to buy worthless patent medicines, then many doctors too are gullible, because many advertisements in some medical journals—I am not mentioning any names—are not one whit better than those found in newspapers. This may sound harsh, but I shall try to show later on that it is the truth. It is, moreover, a fact that many remedies are advertised to the medical profession of whose composition we are wholly ignorant; others are advertised with a list of names of ingredients, but no quantities are specified. Many we know are not what they claim to be, and some can be made at a cost per pound for what they sell per ounce.

There is, of course, a great difference between medical journals. Why should there not be? We have articles and commodities, in fact all sorts of things that can be exchanged for money, to fit any purse and any mental requirement—first class, second class, third class. Why not medical journals? I am not going to make invidious distinctions, however, by singling out certain journals and ridiculing them on account of the amount and quality of their advertisements. As in many other things, we have not yet reached the standard of the old-world nations in medical literature, but, judging by the progress we have made in medical education generally, we may reasonably expect an improvement in our medical journals in the course of time. At present some of our best journals carry a large amount of advertisements of proprietary remedies—but there is no slopping over into the reading matter. The kindergarten nature of the reading matter of some journals is, of course, in perfect harmony with the advertisements they carry.

It is a rather difficult matter to classify briefly the great variety of advertisements found in some medical journals, by the method of exclusion we can, however, obtain a list of advertisements that can fairly be regarded as relating to proprietary medicines. We can thus at once exclude all advertisements relating to medical colleges, to books, surgical instruments and appliances, hospitals and sanatoria, vehicles, cards or announcements of manufacturers of standard preparations, and several other, minor, things or articles. In order still further to limit the list we can exclude advertisements relating to preparations for which no special curative properties are claimed, such as various food preparations, wines and whiskies.

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* Presented with illustrations before the Huntington County (Ind.) Medical Society, March 14, 1905.

[1] Objection may be made to the term "proprietary medicine." As here used it refers to preparations advertised in medical journals, in distinction to patent medicines advertised in the newspapers. That many proprietary remedies are patented and that many patent medicines are not patented is known to everyone who has given the subject any attention.

[2] American Medicine, March 4, 1905.

After thus limiting our list we find a curious condition presented in different medical journals: In good journals comparatively few of the advertisements remain, while, on the other hand, in some of the poor journals the total has been reduced but slightly—and that means that most of the advertisements relate to proprietary remedies.

If we attempt to classify the advertisements of proprietary medicines, as limited above, we again experience difficulties. Some are worded or written so diffusely that a person not familiar with the preparation is at a loss to know for what it is to be used. Some advertisements are practically on a level with those on some waste-paper boxes: "Williams whiskey, that's all." However, by following the same ad through different issues or through different papers we will finally be told "what it is good for," and we shall then be able to classify it.

The examination of proprietary advertisements can be followed along different lines, such as the comparative number and size in different journals; the local character of the ads and the exclusion of German syntheticals; the repetition of an ad in the same issue—sometimes as high as six repetitions in the same issue. There are many aspects of the question, but in the present paper, following along the lines of a previous paper, I desire to take up only the relationship of the advertisements to the condition of the air inhaled—that is, whether the influence of a polluted atmosphere crops out in them as it does in the advertisements of patent medicines in the newspapers.

I was at first undecided how to proceed, but I finally decided on the following: I selected five medical journals, some to which I subscribe and some that were sample copies; all were recent issues although I shall give no dates. In giving the names an alphabetical arrangement will be followed, otherwise according to the numbers preceding or following. The list of journals is:

American Medicine.
Indiana Medical Journal.
International Journal of Surgery.
The Journal of the American Medical Association.
Medical Brief.

The advertisements in the above journals were arranged in a row at the head of a long sheet of paper, the names of the papers were given in a row down the left-hand end. At the proper place under one and opposite the other a number, 1, ½, or ¼, showed the presence and size of an ad and its recurrence in more than one journal.

The following table gives the number of advertisements of proprietary remedies occupying one-fourth page or more. (Ads of less size are very few and would not materially alter the result.)

The Journal American Medical Association	26
American Medicine	34
Indiana Medical Journal	34
International Journal of Surgery	57
Medical Brief	72

In the last-mentioned journal there were a number of repetitions, but in the above table all were counted as one advertisement.

The total number of different kinds of proprietary remedies (as limited above), in the five journals is 132. Out of this great number those occurring but once, that is given in only one journal, were dropped, in order to reduce the unwieldy list. This left 59 for further consideration, and of this number:

1 advertisement occurred in all five journals.
9 were found in four journals.
10 were found in three journals.
39 were found in any two journals.

The local distribution of many proprietaries was brought out at once. The middle West especially has a large number of preparations that are not advertised, or only sparingly so, in Eastern journals, and, on the other hand, some of the Western journals are short on Eastern preparations and especially German synthetics.

Still further reducing our list by omitting those occuring less than three times, that is in any three journals, we have 20 remaining, the distribution now is as follows:

The Journal American Medical Association	8
American Medicine	12
Indiana Medical Journal	15
Medical Brief	17
International Journal of Surgery	19

These 20 may perhaps be considered as fairly representative of our medical journal advertisements of proprietary remedies, and for the territory covered by these journals. The frequency of occurrence is as follows:

Occuring in all five journals: Glycothymoline.

Occurring in four journals: Antiphlogistine, Bovinine, Daniel's Passiflora, Hagee's Cordial Cod Liver Oil, Hayden's Viburnum Compound, Peacock's Bromids, Pepto-Mangan, Sal Codeia, Seng.

Occurring in three journals: Anasarcin, Angier's Petroleum Emulsion, Cactina, Fellow's Hypophosphites, Germiletum, Glyco-Heroin, Listerine, Sanmetto, Tongaline, Unguentine.

This method of selecting a representative list of proprietary remedies is, of course, open to criticism, but almost any other method would be equally so.

What is back of the great mass of advertisements, we may ask. Does the influence of a polluted atmosphere, or of our national spitting habit, crop out as it does in the advertisements of patent medicines in our newspapers?

In a previous paper on "Atypical Cases and Dust Infections"[3] I attempted to show the influence of infected dust, and in a subsequent paper I similarly attempted to show that many of the names used in patent-medicine advertisements go back to infected dust.

Table 1 gives a list of air-borne diseases and names of affections or ailments and symptoms of dust infection. The list is subject to modification and might be considerably enlarged, especially by adding popular names:

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[3] American Medicine, Oct. 1, 1904. Abst. in The Journal A. M. A., Oct. 15, 1904. Dust infection or dust disease may be characterized briefly about as follows: There is an irritation of the mucous membranes; vague wandering pains occur throughout the body, at times more strongly localized at some one point, as in the back or in an arm; there is a feeling of lassitude or discomfort, rising to severe headache, feverishness, loss of appetite and even vomiting. In some individuals there is cough, on account of the unusual irritation of the respiratory mucous membranes; some complain mainly of the nervous symptoms and the inability of applying themselves to a task; in some the wandering or localized pains pre-

TABLE I.

GENERAL.	Respiratory.	Rheumatic.	Nervous.
Bronchitis	X		
Pneumonia	X		
Phthisis—Consumption	X		
Catarrh—Catarrhal affections	X		
Tonsillitis—Sore throat	X		
Coryza—Coughs and Colds	X		
Laryngitis	X		
Asthma	X		
Grippe and Grippe pain	X	X	
Pleurisy	X	X	
Rheumatism and Rheumatic pains		X	
Neuralgia, Neuralgic pains		X	
Lumbago, Sciatica		X	
Uric Acid Diathesis, Lithemia		X	
Backache, Disease of Kidneys		X	
Sick Headache		X	X
Nervous Headache		X	X
Nervous Prostration, exhaustion			X
Neurasthenia, hysteria			X
Insomnia, irritability			X

Accompaniments: Biliousness, dyspepsia, constipation, gastralgia, gastric and intestinal catarrh, anemia, amenorrhea, dysmenorrhea.

A cursory examination of the above 20 preparations will show that some are intended for local application, some are for particular kinds of ailments, and some have a more or less general range—shall I say—of application or usefulness. The so-called "cure-alls" are practically eliminated from the list. In my opinion at least half of the 20 relate to infected dust. This can be shown by table 2.

TABLE II.
MORBIDITY NAMES IN ADVERTISEMENTS IN MEDICAL JOURNALS.

	Angior Petroleum Emulsion.	Antiphlogistine.	Glyco-Heroin.	Fellow's Hypophosphites.	Hagee Cordial Cod Liver Oil.	Gormilotum.	Glycothymoline.	Listerine.	Sal Codein.	Tongaline.
Bronchitis	X	X	X	X						
Pneumonia		X	X							
Phthisis, tuberculosis	X		X	X	X					
Coughs, colds	X		X		X					
Catarrh, catarrhal conditions						X	X			
Respiratory diseases								X		
Grippe and grippe pain		X		X					X	X
Rheumatism, rheumatic pains									X	X
Neuralgia, neuralgic pains									X	X
Headache										X
Lumbago, sciatica										X
Nervous prostration, nerv'n's.				X	X					

If we examine the whole list of 132 preparations we will find that many are what may be called dust advertisements, that is they refer to a polluted atmosphere. Some run along the general line, some belong to the respiratory type, others to the rheumatic or nervous types. Blood deficiencies and alimentary tract derangements may naturally be expected as accompaniments.

Whether the manufacturers who advertise in the medical journals realize the influence of infected dust I am unable to say. Some have admirably grouped disease and symptom names, and they certainly know that it pays to advertise. If there were no demand for their preparations the advertisements would soon disappear.

The similarity in the wording of advertisements of proprietary remedies in medical journals to those of patent medicines in the newspapers is at times remarkable. We of course must make some allowance for the use of technical terms or synonyms, "coryza" sounds better than "cold" in a medical journal.

Some advertisements change their character, depending on the company they are in. In a good medical journal, as in a good newspaper, the claims for curative properties may be moderate and reasonable; in a poor journal or newspaper specific and positive curative properties may be claimed. As an example G may be mentioned as found in two journals:

G— Is almost a specific for catarrh.
G— Is really a specific for catarrh.

COMPARISON OF MEDICAL JOURNAL AND NEWSPAPER ADS.

A short time ago I pasted a lot of clippings from newspapers and various medical journals side by side on a large sheet of paper, to show the parallelism of the two kinds. Beginning with microbe-killers and pain-killers, the list runs into local applications and plasters, rheumatism cures, cough and cold cures, special pain cures, and finally into what seem to be "cure-alls." A study of many of the latter will show, however, that they are really not cure-alls, but simply apply to the varying manifestations of a protean disease, an affection that has many disguises and that is of every-day occurrence. Some of the ads are practically free from all extraneous names; some advertisement writers have certainly made a close study of symptomatology.

There is, of course, a wide difference between different preparations, both of proprietary remedies and patent medicines. There are good preparations among both, but the tendency to fraud is infinitely greater among the latter. It is easy enough to make claims for curative properties, but any one versed in pathology knows that nature does the curing—a remedy may simply make the conditions favorable for nature. In this paper I am simply dealing with the advertisements or rather with their wording and without attempting to discuss the merits of the thing itself, the preparations.

In the following list is given the initial letter, followed by a verbatim list of names of diseases, ailments and symptoms used in the advertisements. They are in sets of twos (with more time and a larger list of ads to select from an even closer agreement could be obtained than is here given). In each set one ad is taken from a medical journal and the other from a newspaper, either one or the other may be given first, and it will tax the reader's ingenuity to tell some apart—especially where technical names in a medical journal advertisement do not preponderate. According to the newspaper advertisement the preparation will "cure," but in the advertisements of proprietaries the term "relief" is generally used, although the term cure is used in many. Some laymen can not understand why we call a preparation advertised in the newspapers "nostrum" and why we use a different word for the preparation advertised in our medical journals, especially where the claims of the two are alike. Some accuse us of making distinctions without there being any difference. Such criticism is usually based simply on the wording of an advertisement and does not consider the intrinsic value of the preparation. A physician might naturally feel aggrieved if accused of prescribing a nostrum.

R.'s *Microbe Killer.*
G. Opposed to germ life.

A. Opposed to pain.
P. D.'s *Pain-killer.*

G. "For catarrhal conditions; nasal, throat, intestinal, stomach, rectal, and utero-vaginal."

P. "Cures catarrh of head, throat, lungs, stomach, kidneys and bladder, female organs."

A. "Pneumonia, bronchitis, pleurisy, neuralgia, rheumatism, burns, erysipelas, acute arthritic and glandular involvement."

A's P-P. "Rheumatism, colds, cough, weak chest, weak back, lumbago, sciatica, sore throat, bronchitis."

A. "Enterocolitis, erysipelas,—pleurisy, pneumonia,—rheumatism, spasmodic croup, synovitis, and any inflammatory disease."

P. "Rheumatism, neuralgia, sore joints, sore throat,—catarrh, hay fever, asthma, throat troubles,—any disease that begins with fever, swelling or inflammation."

T. "Rheumatism, neuralgia, grippe, gout, sciatica, lumbago."

M's R. C. "Rheumatism, sciatica, lumbago, pain in the back, lameness, stiff and swollen joints, and all pains in the hips and loins."

P. "Face pain, back pain, neuralgic pain, rheumatic pain, sciatic pain, dyspeptic pain, la grippe pain, colds and fever."

A. "Fevers, neuralgia, atonic dyspepsia, pneumonia, gastralgia, bronchitis, coryza, catarrhal influenza, la grippe, rheumatism, hysteria, alcoholism, amenorrhea, dysmenorrhea, uterine and intestinal colic, obstinate vomiting, catarrh of the bile ducts, and jaundice."

T. "Gout, rheumatism, uric acid diathesis, constipation, acute and chronic hepatic torpor, obesity, Bright's disease, albuminuria of pregnancy, asthma, incontinence of urine, gravel, cystitis, uro-genital disorders, chronic lead poisoning, headache, neuralgia, neurasthenia and lumbago."

H. "Chronic headache, rheumatism, neuralgia, impaired vision, memory and concentration, persistent dyspepsia, nervousness, melancholia, chronic constipation, loss of weight, susceptibility to cold."

M.'s A.-P. P. "Neuralgia, headache, stomach-ache, menstrual pains, rheumatism, backache, toothache, dizziness, carsickness, indigestion, irritability, sleeplessness, nervousness."

N. "Epilepsy, neurasthenia, insomnia, hysteria, chorea, migraine, neuralgia, restlessness of fevers, alcoholism, asthma, opium or morphin habit, nervous exhaustion, convulsive and reflex neuroses."

U.-A. "Rheumatism, gout, sciatica, lumbago, tonsillitis, hayfever."

S.-L. "Rheumatism, lame back, lumbago, gout, catarrh of bladder, etc."

A. "Rheumatism, la grippe, hysteria, dysmenorrhea, neuralgias, insomnia, headaches, nervousness."

O. "Cold, catarrh, hay fever, rheumatism, indigestion, brain fag, painful menstruation, seasickness, grip."

P. "Coughs, colds, grip, catarrh."

A.'s P.-E. "Winter cough—of bronchitis, phthisis, laryngitis."

B. "Bronchitis, cough, laryngitis, pneumonia, asthma."

F.'s H. T. "Coughs, colds; prevents pneumonia and consumption."

A.-a.-l. "Grippe, pneumonia, colds."

T. "Bronchitis, pertussis. phthisis, laryngitis, pneumonia, bronchial asthma, tuberculosis."

G.-H. "Coughs, phthisis, bronchitis, pertussis, laryngitis, pneumonia, asthma."

B. B. "Coughs, croup, asthma, bronchitis, sore throat; prevents pneumonia and grip."

S. R. "Coughs, colds, grippe, sore throat, rheumatism, dyspepsia, general debility, catarrh, asthma,—kidney trouble,—nervous troubles, neuralgia, whooping cough."

H.'s C. C. L. O. "Phthisis, scrofula and all chronic pectoral complaints, coughs, colds, brain exhaustion, nervous debility, palsy, chronic cutaneous eruptions and impaired digestion."

O.-M. "Coughs, colds, influenza, pneumonia, sore throat and lungs, consumption, and all pulmonary diseases."

F. "Coughs of phthisis, coughs following la grippe, broncho-pneumonia."

F.'s T. "Paralysis, locomotor ataxia, epilepsy, neurasthenia, senile and general debility, mental failure, debilitating losses, spinal weakness, nervous dyspepsia, and all troubles affecting the brain, nerve centres and spinal cord."

L. "Asthma, anemia, bronchitis, blood poison, Bright's disease, coughs, colds, consumption,—catarrh,—hay fever, influenza, kidney diseases, la grippe, leucorrhea, neuralgia, pneumonia, pleurisy, rheumatism, scrofula,—throat troubles, tuberculosis.—."

F.'s S. H. "Anemia, neurasthenia, bronchitis, influenza, pulmonary tuberculosis, wasting diseases of childhood, convalescence from exhausting diseases."

A. A. I. "Anemia, chlorosis, pallor, leucorrhea, backache, dizziness, headache, fatigue, insomnia, colds, catarrh, fever, malaria, pleurisy, malnutrition,—overtaxation, loss of memory, nervousness."

D.'s P. M. Whiskey makes almost more modest claims in the newspaper advertisements than in some medical journals, as the following will show—the newspaper claims appearing first:

"Is the only cure and preventative of consumption, pneumonia, grip, bronchitis, coughs, colds, malaria, low fevers and all wasting, weakening diseased conditions."

"Cures: general debility, overwork (!), la grippe, colds, bronchitis, consumption, malaria, dyspepsia, depression, exhaustion and weakness from whatever cause."

The diffuseness of the terms used and the varying claims made at different seasons of the year are well shown in an ad which appears regularly each week in a number of medical journals. It is usually a full-page ad with the name of the remedy in large type. The disease, ailment and symptom names vary from one to four in any one issue. From July to December of last year the list ran as follows:

Neuralgia and sick headache. Summer diarrhea, cholera morbus, colic. Neuralgic dysmenorrhea. Rheumatism, neuralgia, or any painful lithemic condition. Dysmenorrhea. Neuralgia and neuralgic conditions. Rheumatic and neuralgic pain. Sick headache, rheumatism, neuralgia. Uric acid headache. Rheumatic and neuralgic pain. Sick headache. Rheumatism. Rheumatism and neuralgia. Cranial, respiratory and abdominal pain. Rheumatism, neuralgia, tonsillitis, grippe (Oct. 22). Rheumatic pain. Rheumatic pain. Pneumonia and any inflammatory condition of the throat and lungs. Rheumatism. Grippe, tonsillitis, acute bronchitis, cough. Rheumatic and neuralgic pain. Rheumatic and neuralgic pain. Lithemic headache. Rheumatism, neuralgias or grippe. Rheumatic and neuralgic pain.

The list is suggestive of every-day pains and aches—and to me has the flavor of infected dust. I am not saying anything against the remedy itself, I have never used it, but I know that I get excellent results in cases like the above by the use of salol and codein—as mentioned in my previous paper.

The remedy is evidently, according to that list of names, applicable to the two chief forms of dust infection, the peripheral or rheumatic, and the respiratory. An infected alimentary tract, as in the case of an infant, would likely be benefited by such a remedy.

If instead of "uric acid," infected dust was mentioned as a causative factor, it would, in my opinion, be more in accordance with the facts. To quote from a previous paper, "I have seen so-called rheumatic and gouty and uric acid diatheses disappear as soon as the patient got into a good atmosphere, and, on the other hand, their prompt return on getting back into the dust."

The seasonal influence is especially marked in newspaper advertisements, as I have attempted to show in figures,[4] and it crops out more or less in our medical journals. Thus in the case of the widely-advertised A.

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[4] "City Dust and Patent Medicine Advertisements." American Medicine, March 4, 1905.

In July it was recommended in cases of enterocolitis and cholera infantum; in October it was suggested for pneumonia, pleurisy, bronchitis, adenitis, synovitis, sprains, etc.; in January it becomes a "standard remedial agent for pneumonia, pleurisy or bronchitis, primary or secondary to grip or to any other disease."

There are many physicians who never give any attention to the advertisements of proprietary remedies in their medical journals, yet I venture to say that something may be learned from them.

I have already made this paper unduly long, but in closing I should like to refer briefly to the different types of advertisements which may be designated "infected dust advertisements," or "dust ads," the chief types being the general, respiratory, rheumatic, and nervous. I have several before me as I write and I will give a list of names accompanying them, after the initial letter of the remedy:

A. "Pneumonia, bronchitis, pleurisy, neuralgia, rheumatism, burns, erysipelas, acute arthritic and glandular involvements."

To make this advertisement typical we need take out only two words, "burns" and "erysipelas." (Perhaps the manufacturer will thank me for the suggestion.)

Another advertisement, also beginning with the letter A, has the following list:

"It is indicated in fevers, neuralgia, atonic dyspepsia, pneumonia, gastralgia, bronchitis, coryza, catarrhal influenza, la grippe, rheumatism, hysteria, alcoholism, amenorrhea, dysmenorrhea, uterine and intestinal colic, obstinate vomiting, catarrh of the bile ducts and jaundice."

This is a typical example and evidently the result of much study. One may wonder at the word alcoholism in connection with the list, and yet it seems to be not out of place. We need only consider the large number of victims to the "P— habit," P— being a widely-advertised "catarrh cure" containing 28.5 per cent. of alcohol. Many users in addition to their ailment or affliction undoubtedly develop the alcohol habit.

For the rheumatic type of dust infection the following will answer:

T. "Rheumatism, sciatica, gout, neuralgia, lumbago, grippe, nervous headache."

Objection may be made to the term gout; it should no doubt read gouty conditions, since typical gout is not common among us.

Advertisements of the respiratory type are very common at this time of the year (winter) when pure air is often at a premium; they contain the names of air-borne diseases and accompanying symptoms. A pneumonia that gets well in the course of a day or two under the use of the remedy is, in all probability, not pneumonia at all but a simple case of dust infection with pneumonia-like symptoms; all have seen such cases.

Of the nervous or neurasthenoid type the following will answer:

N. "Indications: neurasthenia, insomnia, hysteria, chorea, migraine, neuralgia, restlessness of fevers, alcoholism, asthma, opium or morphin habit, nervous exhaustion, convulsive and reflex neuroses, etc."

This ad is, of course, broader than is necessary, but the terms alcoholism and morphin habit need not be eliminated—they will apply to cases that have developed the habits in attempting to get relief from their susceptibility to infective dust. This explanation may seem a little far-fetched, but I am offering it simply in explanation of the advertisement as it stands.

The following taken from one of my medical journals may not be out of place:

"THE SUREST CURE—FREE! The pure air, the equable climate, and the constant sunshine of —— will effect the speediest cure of throat and lung troubles, if a cure is possible," etc.

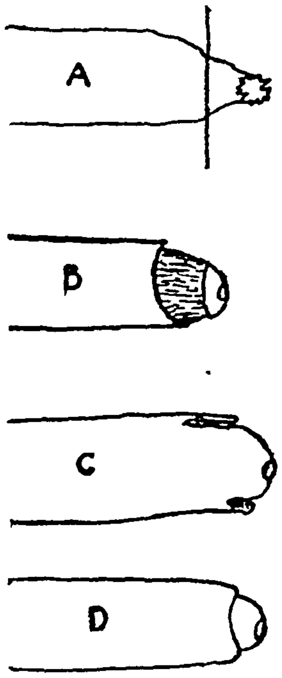
If this paper will lead some men to examine the advertisements of proprietary remedies in their medical journals and to ponder on the cause or the reason of their prevalence, then I have accomplished what I had in mind in beginning this paper.

CIRCUMCISION.

GEORGE TULLY VAUGHAN, M.D.
WASHINGTON, D. C.

The operation of circumcision is one of minor importance—except to the individual concerned or to his family, but it is the proper performance of the little things in life that often works for satisfaction or discontent.

In view of its ancient origin, it is surprising that some generally accepted method of circumcision has not been devised. Some of the objections to the methods in vogue are the difficulty of keeping the wound aseptic, of the adhesions occurring between prepuce and glans, the sacrifice of too much skin, not leaving enough sometimes to accommodate the organ when erect without uncomfortable stretching, and the bad cosmetic effect when an ugly, ragged, dog-eared, onesided or irregular prepuce is left.



a. Line of incision. b. Skin retracted and inner layer of prepuce covering the glans as a hood. c. Line of suture covered and concealed by the skin after the latter has been drawn forward as shown in d.

The following operation has been performed by me for some years past with very satisfactory results:

Attach three hemostats to the margin of the prepuce—one at the frenum and the other two on the sides at equal distances from each other, and make traction in order to put the inner layer on the stretch—the skin is stretched slightly, if at all. While an assistant holds the part, in this position, cut off squarely with scissors or knife that portion of the prepuce which projects beyond the glans, being careful—especially in infants—not to cut the glans. The skin is then retracted and a hood comprised of the inner layer of the prepuce is seen covering the glans about two-thirds of its length. This hood is slit up on the dorsum, with scissors, back to the cervix glandis, and the corners and sides are trimmed off, leaving from one-eighth to one-quarter inch—enough to sew to the skin. This is done with a fine catgut continuous suture, securing with the suture any bleeding vessels. The blood is then wiped off, the foreskin pulled forward so that it covers the glans for from one-half to two-thirds of its length (d), and the patient is put to bed. No dressing is necessary.

The advantages of this operation are:

1. The line of union is beneath the prepuce and is well protected from infection; union usually results without suppuration in from seven to ten days.
2. No dressing is necessary.
3. There is little or no danger of adhesion of the prepuce to the glans after this operation, as a fresh portion of skin is folded in on itself in place of the old, perhaps inflamed and ulcerated portion.
4. There is no danger of contraction of the preputial orifice.
5. The glans is left partially covered as it should be, and plenty of skin is left for adjustment to the varying conditions of the organ.
6. The cosmetic effect, while it may not be considered important, is all that the most fastidious could desire.

Special Article

IMMUNITY.

CHAPTER XVII (CONCLUDED).

THE SIDE-CHAIN THEORY OF EHRLICH AND ITS RELATION TO THE THEORY OF PHAGOCYTOSIS.

Proliferation of Receptors.

Third tenet: Is there any direct experimental proof that those constituents of cells which have been designated as cell receptors actually undergo multiplication in the cell itself as a preliminary to their discharge into the circulation in the form of antibodies? If this condition could be demonstrated in one instance, one might reasonably consider that it typifies a law according to which all antibodies are formed. Further experiments by von Dungern with the precipitins seem to show that such intracellular overproduction actually does occur. The experiments concern the fate of "Majaplasma" (plasm of the crawfish) when injected into the circulation of the rabbit (see above). If a single injection of the serum is given, a specific precipitin for the latter body in due time may be demonstrated in the serum of the rabbit. Eventually the precipitin disappears from the circulation by excretion or other means. At that time, when all the precipitin has disappeared, one may assume that the cells of the animal still contain an increased number of precipitin receptors, although the latter are no longer produced to such an extent that they are thrown into the circulation. If this condition exists the tissues of the animal at this time should be able to absorb a larger amount of the foreign serum, given in a second injection, and perhaps absorb it more rapidly than the tissues of an untreated rabbit. Using a specific precipitating serum in order to detect traces of the foreign serum which still remained in the blood of the injected animal, von Dungern determined that its tissues actualy do absorb the plasma more rapidly than does the untreated rabbit. The cells of the former have a greater absorbing power for the plasma, a greater binding power, therefore, an increased number of receptors.

These examples are, perhaps, sufficient to illustrate the principles of experimentation which have been followed in the attempt to obtain definite proof of the correctness of the essential points of the theory. The results are in entire accord with the primary assumptions and show that the theory continues to serve as an explanatory basis for newly discovered facts, and as a foundation on which new researches may be instituted.

Other Important Principles of Ehrlich.

In addition to the three main principles treated above, the following points are necessarily included in a summary of the views of Ehrlich, many facts of a corroborative nature having been ascertained in independent laboratories.

1. The recognition of different types of tissue receptors by which peculiarities in the action of the different antibodies are explained. Receptors of the first order, as antitoxins, anticomplements and antiamboceptors, are regarded as relatively simple bodies because no other constituent can be recognized than the haptophorous group by which they combine with their homologous substances. Receptors of the second order are more complicated in that they have something more than the mere binding power; usually they are able to produce some observable change in the substance with which they unite. Hence, each has a toxophorous or a zymotoxic group in addition to the haptophorous, and the two groups are part of the same molecule. Toxins, agglutinins, precipitins and complements are receptors of the second order. Receptors of the third order, i. e., the bacteriolytic, hemolytic and cytotoxic amboceptors, are still more complex in that they are, so to say, only partial antibodies, the complete body consisting of the amboceptor-complement complex. The amboceptor is not an active body, but serves as an intermediary body to connect the active substance, complement, with the cell. In the cytolytic process the amboceptor through its cytophilous haptophore first unites with the cell, and as a result acquires an increased affinity for complement, with which it unites through its complementophilous haptophore. Only after this double union is completed may complement affect the cell. From this it follows that complement in the cytolytic process does not combine with the cell directly. As previously stated, Bordet and others oppose the idea that the absorption of these bodies is of a chemical nature, considering it rather to be a physical process.

Ehrlich has intimated his belief that the amboceptors play the chief rôle in the fixation of foods by the cells of the body.

2. The chemical theory explains the specificity which characterizes the formation and action of antibodies. Every antigen has a haptophore which is different from those of other antigens, consequently it unites only with the corresponding cell receptor, and the latter when overproduced and cast into the circulation, retains its specific binding power for the corresponding antigen.

3. The multitude of antibodies which have been obtained indicate that the cells contain a vast number of different receptors which correspond to the three types now recognized; that is, there is a different antitoxin receptor for every kind of toxin, etc.

4. Ehrlich has limited the application of the term toxin to those substances of animal or plant origin, immunization with which causes the formation of specific antitoxins. Other characteristics have been given in Chapter VIII.

5. Receptors of the second order, toxins, agglutinins, precipitins and complements, undergo a peculiar degenerative change, spontaneously or as a result of exposure to injurious agents, in which the toxophorous or zymotoxic group disappears or is rendered inactive. The termination -oid is affixed to the altered bodies, as toxoid, agglutinoid, precipitoid and complementoid. Wechsberg has described a similar degeneration of one of the haptophores of amboceptors, calling the product amboceptoid. Toxoids and complementoids on immunization cause the formation of corresponding antitoxins and anticomplements, by virtue of retention of their haptophorous groups.

6. By means of a special technic devised for studying the neutralization of toxin by antitoxin, i. e., the partial saturation method, Ehrlich found diphtheria toxin to be a very complex substance. Not all the molecules of the toxin have the same affinity for antitoxin, and according to the degrees of their affinity have received the names of prototoxin, deuterotoxin and tritotoxin. Similarly, protoxoids and syntoxoids are molecules of toxoid having different affinities for antitoxin. These conditions are represented graphically by means of the "toxin spectrum" described previously.

7. It is thought that the incubation period which characterizes the action of toxins represents to a large degree the time

required for the action of the toxophorous group after the toxin has been bound by the cells.

8. Ehrlich claims that the diphtheria bacillus secretes two toxins, one of which causes the acute manifestations of diphtheritic intoxication, whereas the second toxin, i. e., toxon, has a prolonged incubation period and probably causes diphtheritic paralysis. Toxon has a lower affinity for diphtheria antitoxin than the other constituents of the toxin solution, but is neutralized by the same antitoxin. This view is strongly opposed by Arrhenius and Madsen, who, working on the basis that the neutralization of toxin takes place according to certain laws of physical chemistry, claim that toxon is nothing more than toxin which has dissociated from the toxin-antitoxin molecule.

9. Ehrlich stands for the multiplicity of complements in opposition to Bordet and others who claim the existence of but one alexin. The various complements differ in the nature of their haptophores, without regard to possible differences in their zymotoxic groups.

10. Only those organs which have suitable receptors may produce an antibody for a given antigen, i. e., only those cells which may enter into chemical combination with the antigen. It does not follow, however, that only those organs which show clinical or anatomic lesions may produce say, an antitoxin; for other organs not so susceptible to the action of the toxin may still possess the suitable receptors and cast them out as antitoxin.

The various types of immunity are explainable on the basis of the side-chain theory in the following terms

Causes of Different Types of Immunity.

1. Natural antitoxic immunity may depend on (a) a lack of suitable cell receptors, the toxin consequently finding no point of attack; or (b) on the presence of natural antitoxins.

2. Acquired active antitoxic immunity depends on the multiplication and excretion of cell receptors (antitoxin) into the circulation, the new formed bodies having the power of combining chemically with additional toxin which may be introduced.

3. Passive antitoxin immunity, as established by the injection of an antitoxin, depends on the ability of the antitoxin to combine chemically with the toxin and thus to divert the latter from the cells.

4. Natural antibacterial immunity depends on (a) a lack of suitable cell receptors with which the toxic bacterial constituents might combine, or (b) on the presence of natural bacteriolysins (amboceptors and complements).

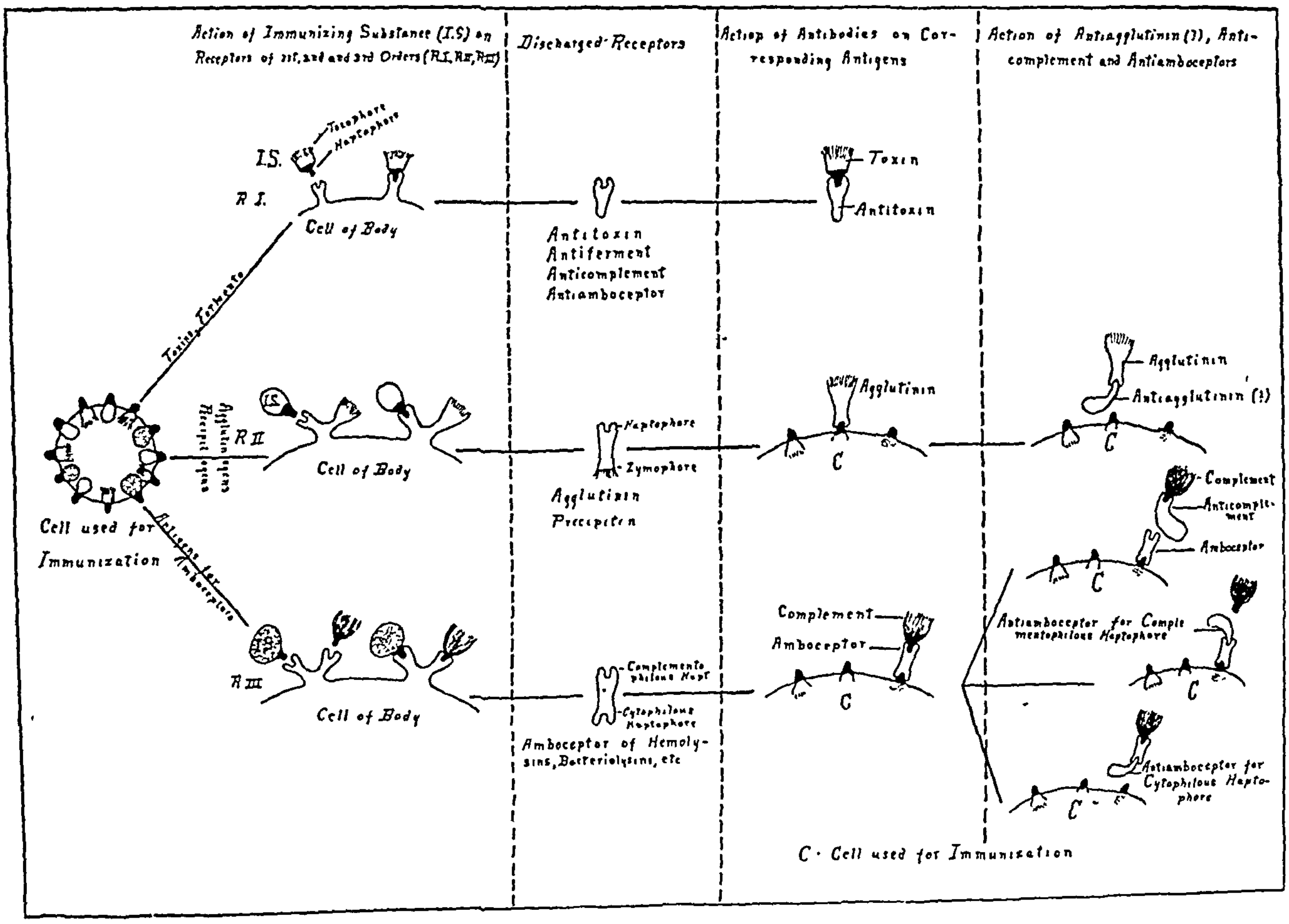
5. Acquired active antibacterial immunity depends on the multiplication and excretion into the circulation of specific cell receptors (amboceptors) which have the power of uniting with complement to kill the micro-organisms which may be introduced.

6. Passive antibacterial immunity, as established by the injection of a bacteriolytic serum depends on the ability of the amboceptors contained in the serum to unite chemically with the receptors of the micro-organism, as a result of which complement is absorbed to kill and perhaps to dissolve the bacteria. The complement may be present in the serum which is injected, or the natural complement of the individual may be utilized by the amboceptors.

Comparison of Theories of Ehrlich and Metchnikoff.

When one seeks to compare the theory of Ehrlich with that of Metchnikoff, one finds little more in common than the general purpose of explaining the phenomena of immunity. Yet it is remarkable that where there is so little in common there are so few contradictions of an essential nature.

The theory of Ehrlich has that degree of definiteness which it must have in order to be a plausible chemical theory, whereas that of Metchnikoff seems more general in that it is so largely biologic and vitalistic.



Each has a certain relation to nutrition. Phagocytosis as a nutritional measure is found in lower types of animals, and accomplishes nothing further than to bring the food substance in contact with the digestive ferments contained in the cell. In relation to nutrition the theory of Ehrlich begins, so to say, where the phagocytic theory leaves off, involving as it does the method by which food substances become a part of the protoplasm.

Metchnikoff with Ehrlich recognizes the various antibodies which have been discovered. The former holds that all are produced by the phagocytes without hypothecating is clearly a method by which they may be formed. Ehrlich's scheme assumes a very precise method by which they may be formed, but designates no particular cells as their producers. An antibody is produced only by those cells with which the antigen may combine, and, in some instances, the leucocytes may be such cells.

The theory of Metchnikoff is not concerned with the structure of toxins and the various antibodies, nor with the method by which toxins may injure the cells, whereas Ehrlich presents definite conceptions on these points.

Both recognize that there is more than one complement (cytase). Ehrlich recognizes no limit to the varieties which may exist, whereas Metchnikoff describes but two cytases, microcytase and macrocytase.

The view which Metchnikoff has expressed, that antitoxin is produced by some action of the phagocytes on the toxin, is directly opposed to that of Ehrlich which recognizes antitoxin as a product of the cell itself.

They agree that amboceptors (fixators) become extracellular in the blood.

Metchnikoff holds that complements (cytases) are produced only by the phagocytes and that these substances are found in the plasma or serum only as a result of injury to the phagocytes (phagolysis). These points are not involved essentially in the theory of Ehrlich. Certain investigators who work in harmony with the side-chain theory, as well as those who represent the views of Metchnikoff, have extracted complement from the leucocytes. Some of Ehrlich's supporters believe that complement exists normally in the plasma.

Metchnikoff and Ehrlich hold divergent views concerning the action of antitoxins, the former believing that antitoxins stimulate the phagocytes to an increased absorption and consequent destruction of the toxin, whereas Ehrlich claims that antitoxin neutralizes toxin by combining chemically with it.

According to Metchnikoff all types of immunity depend directly or indirectly on phagocytic activity. While the side-chain theory is not in harmony with such a broad assumption, it carries with it no denial of the phenomenon of phagocytosis nor of its importance in certain infections.

SCHEME OF IMMUNIZING BODIES AND THEIR ANTIBODIES.

Antigens or Immunizing substance.	Products of immunization		
Toxins	Antitoxins		
Ferments	Antiferments		
Precipitogenous substances	Precipitins		
Agglutinogenous substances	Agglutinins		
Cytotoxin producing substances	Cytotoxins	Hemolysins Bacteriolysins Special Cytotoxins Spermotoxin Nephrotoxin Hepatotoxin Neurotoxin Syncytiolysin etc.	Consisting of two bodies, i.e., complement and amboceptor.

IMMUNIZATION WITH ANTIBODIES.

Precipitins	Antiprecipitins	Consisting either of anticomplements or antiamboceptors; the latter may be an antibody for the complementophilous or for the cytophilous haptophore of the amboceptor.
Agglutinins	Antiagglutinins (?)	
Cytotoxins	Anticytotoxins	
Hemolysins, etc.	Antihemolysins, etc.	

SYNONYMS.

Complement	Amboceptor
Alexin Cytase	[illegible] [illegible] [illegible] [illegible] Fixator Preparator Copula Desmon

From these selected considerations it is seen that the two theories do not stand to each other in the relation of antitheses, and in the light of present knowledge it would seem unwarranted to cling to one view to the absolute exclusion of the other. It does not follow that because demonstrable serum properties explain immunity to one disease, or to a certain group of diseases, that recovery from all diseases must depend on properties of the serum; nor because phagocytic activity explains recovery in certain instances, that recovery from all diseases must depend on a similar activity. The conditions which exist in each disease, of course, must be recognized independently. It so happens that recovery from a certain group of diseases, e. g., staphylococcus, streptococcus and pneumococcus infections, is not accompanied by the development of conspicuous antitoxic or bactericidal properties in the serum, but they are characterized by a great increase in the number of circulating leucocytes (microphages), cells of known phagocytic and bactericidal power, whereas the opposite conditions are found in certain other diseases, e. g., typhoid and diphtheria. If one seeks the most apparent explanation in each case, the great leucocytosis would seem to be of prime importance in the first group, and the antitoxic and bactericidal powers of the serum in the second.

Investigations from various sources render unquestionable the value of phagocytosis in certain infections, and of particular significance is the work concerning opsonins which was referred to in the preceding chapter. From this work it follows that even for the phagocytic destruction of bacteria the serum contains properties which are of essential importance. We may hope that future researches will disclose methods by which the phagocytic power of the leucocytes may be increased, a condition which does not necessarily coincide with an increase in the number of the leucocytes.

The accompanying illustration with some modifications is taken from "Ehrlich's Seitenkettentheorie," by Ludvig Aschoff. The cell used for immunization is assumed to be a cell which will cause the formation of antitoxin, agglutinin or precipitin, and bactericidal amboceptors; the diphtheria bacillus is such an organism considering toxin as one of the receptors of the bacillus. This means that the bacillus is able to cause the overproduction of all three types of receptors. The illustration, however, is on the basis of a hypothetical cell.

(To be continued.)

Clinical Report

POISONING BY ORANGEINE.

J. L. MILLER, M.D.

CHICAGO.

A recent report in THE JOURNAL on some of the coal-tar products[1] recalls to mind a case I saw about three years ago of fatal orangeine poison.

I was first called to see the patient, a young lady, physically sound, who had been taking orangeine powders for a number of weeks for insomnia. The rest of the family noticed that she was very blue and for this reason I was called. When I saw the patient there was extreme cyanosis, not only on the ears and beneath the nails, but on the face and the entire extremities as well. She complained of a sense of faintness and inability to keep warm. At this time she had taken a box of six orangeine powders within about eight hours. She was warned of the danger of continuing the indiscriminate use of the remedy, but insisted that many of her friends had used it and claimed that it was harmless. The family promised to see that she did not obtain any more of the remedy. Three days later, however, I was called to the house and found the patient dead. The family said that she had gone to her room the evening before in her usual health. The next morning, the patient not appearing for breakfast, they investigated and found her dead. The case was reported to the coroner and the coroner's verdict was: "Death was from the effect of an overdose of orangeine powders administered by her own hand, whether accidentally or otherwise unknown to the jury."

While the chemicals in these powders, as the published analyses have shown, do not differ from what a physician would prescribe for headache, I think one of the serious dangers is that these orangeine powders are advertised as being harmless and this, of course, leads the patient to take them freely, being governed by the relief of pain only; while the same remedies prescribed under a physician's directions would be taken only at stated intervals, thus removing one of the very objectionable features of this class of drugs.

100 State Street.

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[1] THE JOURNAL A. M. A., June 3, 1905, p. 1791.

THE JOURNAL OF THE
AMERICAN MEDICAL ASSOCIATION

103 Dearborn Avenue . . . . Chicago, Ill.

Cable Address . . . "Medic, Chicago"

Subscription price . . . . . Five dollars per annum in advance

SATURDAY, JUNE 24, 1905.

[The large amount of space occupied by the index in this issue compels us to omit several departments, and to curtail others.]

THE CURRENT INDEX.

For several years The Journal has been printing an index to the current medical literature of the world, besides an index to the contents of The Journal itself, that for the current volume appearing in this number. We wish again to emphasize the fact that we are giving in this index a guide to the current medical literature of the world, not so full as is contained in the Index Medicus, but sufficiently so to make it very valuable to those who wish to look up any subject. As usual, we shall make a reprint of the index, incorporating in the reprint titles that are referred to, and which appeared week by week in The Journal. These titles, with the index to them, present the medical literature of the world for six months just passed in compact form, for easy and ready reference. The price of this reprint is fifty cents, or seventy-five cents per annum.

SERUMTHERAPY IN HEMOGLOBINURIA.

Although an enormous amount of work has been done in the field of serum therapy, up to the present time practically nothing has been accomplished in the treatment of diseases other than those having a microbic origin. When we consider the work and the time spent in the study of specific sera with all their related problems and the enormous accumulation of facts with extremely complex theories to explain them, we need not be surprised if occasionally the practicing physician who cannot possibly keep up with all of the advances made in this field should utter a word of protest and call for more results which may be of use to him in a practical way. It is with interest, therefore, that the attention of the profesion is directed to some very important results obtained by Widal and Rostaine[1] by directly applying certain facts observed in the study of hemolysis to a case of hemoglobinuria. The patient was a woman who had typical attacks of hemoglobinuria when exposed to even slight degrees of cold. Exposure to a temperature of 10° C. for ten minutes or immersing the hand in water at 10° C. for one-half hour was sufficient to bring on the attacks, which might last for several hours. The hemoglobinuria was preceded by hemoglobinemia. In order to counteract, if possible, this diffusion of hemoglobin from the red blood corpuscles under the above mentioned conditions an antibody or antihemolysin was prepared by injecting an animal several times with human serum. Serum from this animal when injected into the patient had the specific effect of greatly diminishing the action of cold in bringing on the attacks of hemoglobinuria. For instance, exposure to +3° C. for forty minutes did not cause the least signs of hemoglobin in the urine, while this exposure previous to the administration of the serum caused a long and severe attack. The protection lasted for about four weeks and was lost in direct proportion to the diminution of the antibody in the blood.

The explanation given by the authors of the hemoglobinuria caused by the low temperature is as follows: Normally there is present in the plasma a hemolytic and an antihemolytic body which are in a state of equilibrium. The latter is very sensitive to cold, its action being lessened thereby. The former then becomes active and attacks the red blood cells, causing hemolysis to occur. This patient, then, may be considered to have an insufficiency of antihemolytic substance and hence the condition may be remedied by the introduction of an antihemolytic substance, which is readily produced in an animal by inoculation with human serum.

Cases of this sort are rare, especially when such definite symptoms as here occur can be so accurately controlled. For that reason, the results are striking. Of course, results from one case are of little value in themselves but may be extremely suggestive however, and certainly those who may have occasion to observe cases of this character should attempt to substantiate these results, and should report on their investigations.

DROWNING ACCIDENTS.

We are just entering on the season of the year when nearly every morning paper brings the news of a drowning accident. These accidents are mostly the result of carelessness and, as foolishness is a disease, for which unfortunately there is as yet no specific curative serum, they will continue to happen. There are, however, a certain number of these accidents that might be avoided if the necessity for careful precautions was impressed on the minds of individuals who run special risks owing to some readily recognized physical conditions. There are a number of deaths from drowning while bathing in which the victim, though a good swimmer, seems to have been utterly unable to make any effort to save himself. It is usually considered that in these cases there was a simultaneous series of cramplike seizures in various groups of muscles that completely unnerved the swimmer. There is, however, a growing doubt in the minds of many physicians with regard to the acceptance of this explanation. It would seem as though something more serious than cramps were the cause of the helplessness that ensues. Special attention has recently been called to the fact that persons who have been suffering from middle ear disease and who have already had some symptoms of vertigo are more likely to be the victims of these accidents than are others. It seems not improbable that something happens in the semicircular canals and that this is the reason for the utter helplessness. Swimming is, after all, mainly a balancing feat in the water. The semi-circular canals are the organs of direction, and the maintenance of equilibrium depends on them. If there should be then a sudden hemorrhage even of very small amount, into this delicate organ (and the possibility of such an accident is never far off amid buffeting waves), the result would surely be serious if the person swimming were at the moment beyond his depth. Persons then who suffer from middle ear disease should be warned not to take risks in swimming beyond their depth, particularly on blustery days, when breaking waves are likely to prove sources of injury to structures that are already not in the best resistive condition.

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[1] C. R. Soc. Biologie, vol. lviii, 1905.

There is another class of cases for whom a warning also seems necessary. Certain neurotic individuals are especially liable to suffer from cramp-like seizures that for a time prevent the use of their limbs. Unfortunately, this class of persons is rather prone to make foolhardy attempts to swim distances beyond their strength. Their neurotic habit makes them especially liable, through auto suggestion, to lose control over their motor apparatus, and consequently to become helpless on such a swimming journey. If there is no one near them the fright adds to their paretic condition, and the result is that, unless rescue is immediate, another drowning accident is added to the long list. Not a few of these persons have had warnings in the shape of sudden moments of fright during which their swimming power was seriously impaired, on previous occasions, and yet they dare to encounter similar danger again because they harbor the notion that by training they can discipline themselves not to be so timorous. This is, however, an extremely imprudent procedure. As a matter of fact, all persons with any tendency to cramp-like seizures should be advised against going beyond their depth except under such circumstances that they can be assured of prompt assistance in case of need.

ADVERTISING PSYCHOLOGY.

Much has been said recently, even in prominent educational circles, about the psychology of advertising, and this subject is considered to require special study on the part of those who would succeed in capturing the gentle buyer. We are interested only in the psychology of medical advertising and especially in one feature of it, the psychology of the mail order business in proprietary medicines. There is a special periodical devoted to the instruction of those who wish to make fortunes out of selling by mail, which contains in a recent issue the following paragraph:

"They say we are all crazy on some subject, and my long experience has taught me that there are tens of thousands of men and women on this continent who are absolutely crazy on the subject of ordering by mail. Many of them spend their entire earnings in this way. This is the class you must reach. 'But how am I to reach that class?' you say."

The publisher offers to furnish the names of such persons at a reasonable remuneration per thousand.

He does not, however, merely furnish names in general, but he has specific classes of would-be purchasers with whom he can put his clients in touch. For instance, he offers to supply lists of names of persons suffering from various diseases. Such diseases he says he has carefully classified. The remuneration for these names is as might be expected much higher than for just the ordinary lists of individuals who may have a fad for buying by mail. There are different prices for lists of those suffering from different forms of disease. As might be expected, the names of sufferers from private diseases of various kinds command the highest price, since such persons are usually known to be much more gullible than others. We should like to have the details of the prices for lists of sufferers from other diseases, since in this way some idea for medical purposes might be obtained of the affections which are supposed to affect the minds of patients more than others and thus make them fall more readily the victim to the wiles of the mail order man.

The publisher of this guide to wealth by the mail-order-business route has much to say about the necessity for proper supervision of the mails and for the careful issuance of fraud orders against those who have abused the mailing privileges. Indeed, there is so much of this in his columns that the casual reader is apt to think within himself that he protests too much. Certain it is that some of the scheming which he suggests smacks very strongly of deliberate deceit of the public by means of certain simple medical formulæ. He has, for instance, a prescription for rheumatism that he offers to sell very reasonably to whomever may wish to advertise it, guaranteeing that it can be put up for a few cents and sold for a dollar a box. There is a formula for vaginal wafers, which he says can be put up in boxes at the cost of about three cents a box, to retail at $2.00. Their success, he adds, has been remarkable during the past twenty years. "They sell best under a woman's name."

It would be well for physicians to warn sufferers from certain classes of diseases not to allow their names to get into the hands of any proprietary medicine concern, since they are liable to be passed on from one to another under certain conditions and so the sufferer is likely to find himself deluged with literature calling attention to other remedies for his disease after he has failed to find the first one that he tried helpful and has given up its use. There are hundreds of thousands of sufferers who are desperate enough to grasp at any straw; and there are always villains who have the straws to offer.

THE MEDICAL SITUATION IN RUSSIA.

The effect of the war on the medical profession in Russia, has been marked, according to the testimony in the *Archives Générales de Médecine*, of Dr. Marcon, a French physician, resident in St. Petersburg. Nearly all the army reserve physicians, as well as the more advanced students of the medical schools, have been called to the front, and while there are yet sufficient in the cities for the paying clienteles, the country districts are almost without physicians. It has been proposed to open the gates, temporarily, to foreign physicians, under the condition that they are acquainted with the Russian language, but, as Dr. Marcon says, there will *probably* not be many who will avail themselves of these conditions. Country practice in Russia is not ordinarily attractive and in the present state of affairs and in case of epidemics, such as the now threatening cholera, the situation of the physician among the ignorant peasantry might easily be unpleasant, if not, indeed, actually perilous. Another peculiar feature which deserves mention is that the present political agitation has resulted in the closing of all the institutions of higher education, including the medical schools. Professors and students have alike "struck," to use the common expression of the day, and this serious interruption occurs at a time when the young physicians have gone to the war, and pestilence is threatening a large portion of the empire. If cholera does come it will find a clear field for its ravages in Russia. Still another thing that he mentions is the marked increase of insanity among the soldiers. Between internal disturbances and external war the empire of the czars is in a bad way. "Let us have peace."

THE LAST (?) WORD FROM CONCORD.

The daily press of June 12, contained "Mrs. Eddy's Good-By." Those who recoil from open blasphemy will be comforted at the prospect of a cessation of the Concord pronunciamentos. Unhappily this "last" deliverance is more shocking to the Christian sense of the community than most of its predecessors. Mrs. Eddy calmly announces that hers is "a new religion," that she herself is "an interpreter of Jesus' teaching," and that her book, "Science and Health," is "a fulfillment of the New Testament promises of a latter-day revelation"! The whole document is a series of questions propounded by a correspondent of the Boston *Herald*, together with Mrs. Eddy's replies. Having given this last public utterance, Mrs. Eddy desires that she now be permitted uninterrupted opportunity, "to assimilate myself to God"! On the medical side, this proclamation shows that denial of the obvious facts of life is not inconsistent with great modifications of belief and teaching due to very appreciable contact with those same mundane phenomena. "There is no material science" and "Christian Science denies the existence of disease germs," but in case of infectious disease the Christian Scientist must yield himself to the customary treatment of isolation and disinfection "if the law demands it." Asked whether a "Scientist" should disregard the laws of hygiene or should make use of physical culture and fresh-air treatment, Mrs. Eddy artfully dodged. As to the propriety of calling on the resources of surgery she replied "Yes and no," which must be very satisfying to her sane followers who believe in her omniscience. She does not opine that society could get along without jails, almshouses, hospitals, and philanthropic works, but cripples, criminals and poverty would cease to exist if the world would abandon the study of disease and crime and devote itself to the study of wealth, health, and love. Only to a slight extent can it be claimed that Mrs. Eddy "improves with age." The recent revolt of one of her leading Boston champions with his bitter denunciation of her methods and motives undoubtedly has been a hard blow to Mrs. Eddy and her followers. Signs of dissension and disintegration are multiplying, though in some places the cult yet appears to spread.

Medical News

ILLINOIS.

Personal.—Dr. William Hill, Bloomington, who has been critically ill, is reported to be improving.——Dr. Mont. M. Brown, Quincy, will go to India as a medical missionary in September.——Dr. Robinson R. Whiteside, Moline, has been appointed county physician for the poor in Moline, and Dr. Cyrus T. Foster, for the poor in Rock Island.——Dr. H. H. Fletcher, North Henderson, has returned from Europe.——Dr. James M. Postle, De Kalb, has been commissioned assistant surgeon, Illinois National Guard, with the rank of first lieutenant.

Military Surgeons Meet.—At the annual meeting of the Association of Military Surgeons of the State of Illinois, held at Danville, June 8, the president, Col. N. Senn, and the secretary, Lt.-Col. Charles Adams, both of Chicago, were reelected. Dr. Charles D. Center, Quincy, read a paper on influenza; Lt.-Col. George Paull Marquis, Chicago, presented an article on "Mastoid Operation;" Col. Senn gave an abstract of an exhaustive article on iodin and its use as a bactericide and especially as a streptococcicide, and Capt. S. C. Stanton, Chicago, demonstrated the method of physical examination of recruits. The association decided to hold its next meeting in Moline.

Chicago.

Rush College Commencement.—On June 16 Rush Medical College graduated a class of 71. Dr. Ira Remsen, president of Johns Hopkins University, Baltimore, delivered the doctorate address, and the dean, Dr. Frank Billings, conferred the degrees.

Personal.—Dr. Richard J. Tivnen and his mother sailed for Europe June 13.——Dr. Marie A. Olsen has been re-elected president of the Tabitha Norwegian Hospital Society.——Dr. Charles J. Whalen has been appointed commissioner of health, vice Dr. Arthur R. Reynolds.

The Death Record.—For the elapsed 17 days of June the rate was 12.73; for the week ended June 17 there were 458 deaths, equivalent to an annual mortality of 12.01, and the average of the decade is 14.00. June, 1904, is the record month of lowest mortality—the rate being 11.02 per 1,000 of the populatio Among the important causes of death showing decrease most notable are: Pneumonia, 18; consumption, 10; im- disease, 12; Bright's disease and measles, 8 each, and inds fever, 4. The acute intestinal diseases show an increase of bronchitis of 9, and diphtheria of 4. Only two suicide reported during the week—the smallest number in ing week for several years—the average weekly number du elp- previous ten years being 7.5.

INDIANA.

Personal.—Dr. Frederick F. Kremer, Versailles, has been appointed physician of Ripley County.——Drs. B. B. John, Gentryville, and Charles S. Williams, Columbia City, are seriously ill.

The Law Supreme.—After a long and determined contest between the unregistered osteopaths of Indiana and the State Board of Medical Registration and Examination, the board has won. Ed. C. Crow, Elkhart, abandoned further opposition, pleaded guilty to practicing medicine without a license, and was fined $25 and costs, which he paid.

La Porte County Medical Society.—The thirtieth anniversary of this society was held at La Porte June 14. After the program clinical cases were presented, and in the evening a banquet was given at the Teagarden Hotel, at which the first president, Dr. George L. Andrew, and the first secretary, Dr. Nelson S. Darling, the only two surviving charter members, were the guests of honor.

May Morbidity and Mortality.—The most prevalent disease in May was rheumatism. Diarrhea, which stood seventh in April, rose to second place. Diseases of the air passages, as tonsillitis, bronchitis, influenza and pneumonia, and also cerebrospinal meningitis, decreased very materially. Smallpox by comparison with the same month last year, showed a remarkable decrease. Only 25 cases were reported from 11 counties, with 2 deaths, whereas in May, 1904, there were 259 cases in 36 counties, with 6 deaths. Typhoid fever also shows a decrease. There were 307 cases reported from 23 counties, with 32 deaths. Pneumonia in May last year caused 319 deaths, and this year only 170. The death rate for the whole state was equivalent to an anual mortality of 11.3 per 1,000. By important ages the deaths were: Under 1 years, 310, or 13.1 per cent.; from 1 to 5, 126; from 5 to 10, 41; from 10 to 15, 39; from 15 to 20, 110; 65 and over, 681, or 28.9 per cent. of the total. Cancer caused 122 deaths. There were in all 143 deaths from violence, 5 of which were homicides and 23 suicides. Of the suicides 7 were females; 9 employed carbolic acid, 5 hanging, 4 shooting, 1 drowning and 1 jumped from a train.

MARYLAND.

Baltimore.

Personal.—Dr. Ronald T. Abercrombie has been appointed director of athletics at the Johns Hopkins University. For seven years he has been identified with Hopkins athletics and was its star lacrosse player. He has also received the appointment of resident physician at the Church Home and Infirmary. ——Dr. Hubert Richardson has returned from a trip to Jamaica.

Hospital Buys New Quarters.—The South Baltimore Eye, Ear and Throat Hospital has purchased a permanent home for $13,000. The lot is 90 by 200 feet and is *improved* by a building containing 15 rooms. This is the third special hospital of the sort in Baltimore, the others being the Presbyterian and the Baltimore, the former in the eastern, the latter in the western part of the city.

Home for Invalid Children.—The Harriet Lane Home for Invalid Children will be built on the grounds of the Johns Hopkins Hospital. It was provided for by the late Mrs. Harriet Lane Johnston, niece of President Buchanan. She left the residue of her estate for this purpose, which provides an endowment of about $400,000. An expert investigation will be made of the best children's hospitals at home and abroad before the plans are made.

Johns Hopkins Hospital Appointments.—The following appointments to the staff of the Johns Hopkins Hospital are announced: Medical—Drs. Douglas Vanderhoof and Frank Roul, Baltimore; Khleber H. Beatty, Fort Worth, Texas, and William L. Moss, Athens, Ga.; surgical—Drs. Julius Theodore Haller, Davenport, Iowa; Clifton M. Faris, Sacramento, Cal.; Robert B. Slocum, Albany, N. Y., and Edward H. Richardson, Farmville, Va.; gynecologic—Drs. Harry Weil, San Francisco, Cal., and Frederick R. Ford, Elmira, N. Y. Two appointments remain to be announced.

Johns Hopkins Faculty Changes.—The commencement of the Johns Hopkins University was held June 13. The following appointments in the medical faculty were made: Dr. William Osler, honorary professor of medicine; Dr. Florence R. Sabin, associate professor of anatomy; Dr. William S. Baer, associate in orthopedic surgery; Dr. Thomas R. Boggs, associate in medicine; Dr. Charles H. Bunting, associate in pathology; Dr. Richard H. Follis, associate in surgery; Dr. William W. Ford, associate in bacteriology; Dr. J. Morris Slemons, associate in obstetrics: Dr. George Walker, associate in surgery; Dr. J. Hall Pleasants, instructor in medicine; Dr. Francis C. Goldsborough, assistant in obstetrics; Dr. Arthur W. Meyer, assistant in anatomy; Dr. Robert Retzer, assistant in anatomy, and Dr. George H. Whipple, assistant in pathology. The two university fellows in pathology and physiology are Drs. Ernest K. Cullen and J. A. E. Eyster. The Adam T. Bruce fellow in biology is Forrest Shreve, Ph.D. Interest centers in the associate professor of *anatomy from the fact that a woman has been* given the position.

MASSACHUSETTS.

Will Build Cottage Hospital Ward.—The Ladies' Aid Society of Malden has asked permission to raise the $2,500 to be used in erecting a small cottage hospital ward on the hospital grounds.

Bequests.—Mrs. Emily Warren Appleton has left by will, $5,000 to the Kindergarten for the Blind, $2,000 to the Massachusetts Charitable Eye and Ear Infirmary, and $5,000 to the Instruction District Nursing Association.

State Society Meeting.—The sessions of the Massachusetts Medical Society in Boston, June 13 and 14, were very largely attended. The following officers were chosen: *President*, Dr. Arthur T. Cabot, Boston; vice-president, Dr. Frederick H. Thompson, Fitchburg; treasurer, Dr. Edward M. Buckingham, Boston; corresponding secretary, Dr. Charles W. Swan, Brookline; recording secretary, Dr. Francis W. Goss, Roxbury, and librarian, Dr. Edwin H. Brigham, Brookline.

Fraud Order Issued.—The postoffice department has issued another fraud order in Boston, this time against the Dr. A. M. Wells Company. The basis for these actions is illustrated in the following opinion of the case by E. W. Lawrence, acting assistant attorney general:

> The business of the concern is fraudulent for two reasons: first, the representations of the advertisement used to induce patients are in numerous and material respects false and fraudulent; second, the *company* fraudulently treats patients for diseases with which they are not afflicted, and accepts money for so doing, well knowing that the patients do not need such treatment, or, as a matter of fact, any treatment whatever. The representation that the doctor of this concern is a graduate of Harvard Medical College is false and fraudulent.

MISSOURI.

Personal.—Dr. Finis L. Anderson and family, Joplin, sailed for Europe June 15.——Dr. Porter E. Williams, Bunceton, assumed his duties as superintendent of Hospital for the Insane, No. 1, Fulton, June 13.——Dr. John A. J. James, St. Louis, departed for Europe June 15.——The new board of managers met June 13, 1905, and elected Dr. William F. Kuhn, Kansas City, superintendent of State Hospital No. 4 for the Insane, Farmington, succeeding Dr. Frank L. Keith.

State Appointments.—The governor has announced the following appointments: Drs. Paul Y. Tupper, St. Louis; Robert H. Goodier, Hannibal; W. S. Thompson, Armstrong, and John T. Thatcher, Oregon, members of the State Board of Health. Drs. William M. Bayless, Macon, and L. Claude McElwee, St. Louis, as members of the commission to locate the state sanatorium for the treatment of pulmonary tuberculosis, for the location and erection of which $50,000 was appropriated by the last legislature. Dr. Frank J. Lutz of St. Louis was reappointed surgeon general on the governor's personal military staff.

Hospital News.—The Frisco System Hospital to be built in St. Louis will be erected corner of King's Highway and Euclid Avenue. In all probability this will then be made the central hospital of the system, taking the place of the present hospital located at Springfield.——Work has been commenced on an $85,000 addition to the Evangelical Deaconess' Hospital at Sarah Street and West Belle Place, St. Louis. Owing to an overcrowded condition of the hospital this step has become imperative, and building will be pushed as rapidly as possible. ——The Robert A. Barnes Hospital will not be built for another year, and possibly longer, as the funds are not sufficient to erect the hospital. The official name of the institution will be the "Robert A. Barnes Hospital." It is an entirely separate undertaking from the Barnes Medical College. Robert A. Barnes died about twelve years ago, leaving $1,000,000 for the erection of a hospital. The fund is under the supervision of the Methodist Episcopal Church South, but the hospital will be *non-sectarian*.

NEW YORK.

New York City.

Off for Europe.—Dr. and Mrs. Walter F. Chappell sailed on the *Cedric* for Liverpool, June 16.——Dr. and Mrs. George C. Freeborn sailed on the *Vaterland* for Dover, June 17.——Dr.

and Mrs. George R. Lockwood sailed on the *König Albert* for Genoa, June 17.

For Sanitary Treatment.—The Christian Workman's Institute wants to have a bill passed in the legislature providing for the purchase by the city of unsanitary tenements in order that model buildings may be put up in their place. The Church Association for the Advancement of the Interests of Labor will indorse this movement.

High Death Rate.—The death rate for the week ended June 15 was 17.73 per 1,000, while for the corresponding week of 1904 it was 16.61. The cause of this increase is the unusually large number of deaths from heart disease, pneumonia and tuberculosis. The deaths from heart disease numbered 123, as against 58 for the same period of 1904.

Cornell Commencement.—The seventh annual commencement exercises of the Cornell University Medical College were held June 14. Dr. Jacob G. Schurman, president of Cornell University, conferred degrees on a class of 72, which included eight women, and Dr. George H. Simmons, Chicago, delivered the commencement address on "Work, the Basis of Success in Medicine."

Contagious Diseases.—There were reported to the sanitary bureau for the week ended June 10, 770 cases of measles and 18 deaths; 522 cases of diphtheria, with 30 deaths; 339 cases of tuberculosis, with 167 deaths; 152 cases of scarlet fever, with 13 deaths; 52 cases of cerebrospinal meningitis, with 57 deaths; 49 cases of typhoid fever, with 10 deaths; 120 cases of chickenpox, and 1 case of smallpox.

Work of the Milk Dealers' Association.—The executive committee of this association, of which Dr. Ernest Lederle, former health commissioner, is the moving spirit, have had a meeting for the purpose of drafting a constitution and by-laws. So far 45 of the leading milkmen have joined the movement. One milk dealer has been sentenced to five days' imprisonment in the Tombs. He is the second dealer who has been imprisoned instead of fined. Within the past week 17 dealers have been fined from $5 to $150 each.

Dispensary Treatment of Tuberculosis.—Drs. T. W. Bickerton and D. M. Barston, members of the committee appointed to review the work of curing tuberculosis carried on at the Post-Graduate Hospital Dispensary, announce that 5 more cures have been effected. This makes a total of 45 passed on by the committee since it has been conducting experiments to show that uncomplicated cases of pulmonary tuberculosis could be cured by dispensary treatment. The treatment employed is founded on the fact that consumption is a result of malnutrition. It aims to build up the body by a scientific diet faster than the disease can break it down. In order to make sure that the patients consume the proper quantity of food they are made to report at the dispensary twice daily and drink there an emulsion of fats.

PENNSYLVANIA.

Hospital Saturday and Sunday in Pittsburg.—The sum of $6,700 was distributed among the associated hospitals of Pittsburg June 9 by the Hospital Saturday and Sunday Association.

Injured Physicians.—Dr. Addison M. Rothrock, West Chester, while trying to separate two fighting bulldogs June 1, fell and broke his right arm below the elbow.——Dr. Martin E. Griffith, Manor, was seriously injured in a runaway accident May 30, near Monessen.

Health Advisers Named.—Governor Pennypacker has appointed the following advisory committee to act with Dr. Samuel G. Dixon, the new state health commissioner: Dr. Charles B. Penrose, Philadelphia; Dr. Samuel T. Davis, Lancaster, former member of the assembly and president of the State Board of Health; Leonard Pearson, Philadelphia, state veterinarian; Dr. Adolph Koenig, Pittsburg, president of the Medical Society of the State of Pennsylvania; B. H. Warren, West Chester, state dairy and food commissioner, and Lee Masterson, Johnstown, civil engineer.

Philadelphia.

Money for Germantown Hospital.—Germantown Hospital has received $5,000 each from Dr. and Mrs. George Woodward, Mr. Randal Morgan and Stephen Green.

Personal.—Dr. William S. Wadsworth, a coroner's physician, was operated on for appendicitis in the German Hospital, June 14.——Dr. Wilbur Pepper was thrown from his carriage in a runaway accident June 16 and sustained a fracture of the left arm.

Meeting of the Medical Club.—The regular quarterly meeting of the Medical Club was held June 16. It was given in honor of the prominent medical publishers of America. Among the publishing houses represented were W. B. Saunders & Co., P. Blakiston's Son & Co., Lea Brothers & Co., J. B. Lippincott Co., E. B. Treat & Co., D. Appleton & Co., and other guests.

University Commencement.—The one hundred and forty-ninth annual commencement of the University of Pennsylvania was observed June 14 in the Academy of Music. The class oration was delivered by Dr. George Harris, president of Amherst College, and a class of 108 was graduated. The honor men were Drs. Arthur Hilton Payne, Frederick A. Packard, George Morris Piersol, Henry A. Schetze and H. R. Owen.

Health Report.—The deaths from all causes during the week ended June 17 numbered 421. This is a decrease of one from those reported last week, and an increase of 33 over that of the corresponding period of last year. Typhoid fever is still prevalent, 17 deaths being due to this condition; an increase of 6 deaths as compared with last week. The principal causes of death were: Typhoid fever, 17; tuberculosis, 69; diphtheria, 9; cancer, 21; apoplexy, 13; heart disease, 39; acute respiratory disease, 39; enteritis, 36, and Bright's disease, 32. There were 269 cases of contagious disease reported, with 29 deaths, as compared with 229 cases and 20 deaths for the previous week.

GENERAL.

Plague in Hawaii.—Two cases of plague have occurred at Hilo. One patient is recovering, but in the second case the prognosis is doubtful.

American Association of Genito-Urinary Surgeons.—At the annual meeting, held in Montreal June 13 and 14, the following officers were elected: President, Dr. F. Tilden Brown, New York; vice-president, Dr. William K. Otis, New York; secretary, Dr. John Van der Poel, New York; member of council, Dr. Hugh H. Young, Baltimore. Next place of meeting, New York City.

Health Report of the Philippine Islands.—The health report of the Philippine Islands and the city of Manila for February states that during the month there were 581 births—309 males and 272 females. There were 670 deaths in Manila, of which number 608 were residents and 62 transients. The infant mortality represented 49 per cent. of the total deaths of the month. The largest number of deaths from any one cause was 191, from convulsions of children. There were 105 deaths from tuberculosis of the lungs, 32 from chronic diarrhea, 8 from typhoid fever and 15 from meningitis.

Frisco System Medical Association.—At the annual meeting of this association the following officers were elected for the ensuing year: President, Dr. B. F. Fortner, Vinita, I. T.; vice-presidents, Drs. R. J. Redden, Sulligent, Ala.; J. E. Teft, Springfield, Mo.; J. L. Burns, Jonesboro, Ark.; J. A. McAllester, Sapulpa, I. T.; G. C. Purdue, Wichita, Kan.; W. E. Hempstead, Arapahoe, O. T.; W. E. Sturgis, Stephensville, Texas; P. M. Farmington, Memphis, Tenn.; M. J. McNeill, Olive Branch, Miss.; secretary, R. W. Hogeboom, Springfield, Mo.; treasurer, W. A. Camp, Springfield, Mo.

Meeting of American Medical Society for Study of Inebriety and Alcohol.—The thirty-fourth annual meeting will be held in the Atkinson school building, Portland, Ore., July 12 and 13, 1905, beginning at 9 a. m. Dr. W. S. Hall, Chicago, will deliver the annual address. The committee on the influence of alcohol in literature and history will make a report through its president, Dr. John Madden. The committees on heredity as a cause in disease and spirit taking and on patent medicines will report. Papers will be read by Drs. MacNicholl, Steward, Nash and others. The second session, Thursday, July 13, at 9 a. m., will be a memorial service to the late Dr. N. S. Davis.

Special Meeting of the National Tuberculosis Association.—A special meeting of the National Association for the Study and Prevention of Tuberculosis is called for July 6, at 4 p. m., in Room 613 of the United Charities building, 105 East Twenty-second street, New York City. to consider the following amendments and additions to the by-laws which were approved by the board of directors at the annual meeting in Washington, May 18, 1905:

Article II, Section 1 of the By-laws shall be amended to read as
follows: Section 1. The association shall, at its first meeting, e n to
a board of thirty directors, divided into five groups of six ea ice to
serve one. two, three, four and five years, the duration of o served
be determined by lot; thereafter, retiring directors, who ha the year
a full term of five years, shall not be eligible for re-electio shall not
of retirement; provided, however, that this restrictio rectors may
apply to the secretary or treasurer. The Board of D eting of the
hereafter, at the annual meeting or at a special m onal members
Association, be increased to at least sixty, the addi visions of the
to be divided into groups in accordance with the p the same re-
preceding paragraph of this section and subject t one-third of
strictions. It is furthermore provided that at le of laymen. At
the total membership of the board shall consist

annual meetings succeeding the increase of the board of directors to a membership of sixty, twelve directors shall be elected for terms of five years, or, in case of vacancies in any of the groups, for such unexpired terms.

Article VIII of the By-laws shall be amended to read as follows: Propositions to amend the Constitution may be presented in writing, etc.

Article IX shall be amended to read as follows: By-laws may be amended in the same manner as the Constitution, or by a two-thirds vote of the members present at a meeting of the Board of Directors, provided that in the latter case the proposition to amend has been presented in writing at a previous meeting of the Association, or of the Board of Directors, and that subsequently to such presentation twenty days' notice in writing has been given of the proposed amendment in the call for the meeting.

CANADA.

University News Items.—The medical faculty of Queen's University, Kingston, Ont., will ask the Ontario government for financial aid, the same as promised to the medical faculty of Toronto University, for the hospital.——McGill University, having found that extension has worked well in the province of British Columbia, may establish a college at Calgary, N. W. T.

Personal.—Dr. E. K. Cullen of the house staff of the Toronto General Hospital, and a brother of Dr. Thomas S. Cullen, Baltimore, has been appointed a fellow in pathology at Johns Hopkins University, Baltimore.——Two French medical students, recently in Winnipeg, have reached Wetaskiwin, Alberta, N. W. T., on their tour around the world, and in strict accordance with the terms prescribed, they are traversing this continent on foot. After reaching Vancouver they will embark for the Orient.——At the annual commencement exercises of the University of Toronto, June 9, the following honorary degrees were conferred: Lewellys F. Barker, Baltimore, M.D.; Dr. J. Algernon Temple, Toronto, LL.D.; Hon. Dr. R. A. Pyne, LL. D.——Dr. Freeman has resigned from the position of medical superintendent of the Hamilton (Ontario) General Hospital. Dr. E. R. Secord, Brantford, Ont., and Dr. McIlwraith, Binbrook, Ont., are stated to be applicants for the position.——Dr. Charles O'Reilly, the retiring superintendent of the Toronto General Hospital, was tendered a banquet on the evening of June 10 by his medical friends in Toronto and vicinity. Dr. O'Reilly was the recipient of an address and two handsome pieces of silver plate. Dr. O'Reilly, with Mrs. O'Reilly, his brother, Dr. Gerald O'Reilly of Guelph, and his only son, Dr. Breffney O'Reilly, will sail July 1 for Ireland and a two years' visit to the old land.

Ontario Medical Association Meeting.—The twenty-fifth annual meeting of this association was held in Toronto, June 6-8, and proved one of the best and the second largest meeting in the history of the organization. Dr. William Burt of Paris, the president, was present at all the sessions and delivered the annual presidential address. Dr. A. J. Ochsner, Chicago, delivered the address in surgery, taking for his subject, "Surgery of the Stomach from the Standpoint of the Clinician," a paper which was listened to with marked attention, was very much appreciated, and resulted in a vote of thanks, and a prolonged and intelligent discussion. Dr. W. B. Pritchard, New York, delivered the address in medicine, his subject being, "The American Disease—an Interpretation," a deliverance which excited some adverse comment, owing to the fact that Canadians claim to be Americans, while yet British, and further, because of the fact that we on this side of the line are not much afflicted with that malady. Dr. H. A. Bruce's paper reported 400 operations for appendicitis in the past eight years, and advocated the calling of the surgeon as soon as the medical man made his diagnosis. Dr. R. W. Bruce Smith, inspector of hospitals and insane asylums, read a paper on "Preludes to Insanity." The author's desire to do away with the words asylum and lunatic met with unanimous approbation. Dr. D. Campbell Meyers read a paper on "Wards in General Hospitals for Acute Nervous and Mental Diseases," which resulted in a committee being appointed to see this matter prosecuted. It was decided to convene next year in Toronto, with Dr. George A. Bingham of Toronto, president; Dr. Charles P. Lusk, Toronto, secretary, and Dr. Fred. Fenton, Toronto, treasurer, although the next meeting of 1906 may be a purely business one, as the presence of the British Medical Association in Toronto in 1906 is looked for.

FOREIGN.

Advertising Medical Sheets and the Medical Societies.—The international conference of the medical press last month was recently mentioned in these columns. The question of "house organs" was discussed at some length, with special reference to the so-called medical journals which are distributed gratis and which are liable to be taken seriously by certain people. A resolution was adopted asking medical societies everywhere to undertake a sanitary reform in this matter and to exclude this class of periodical. This will allow the true scientific publications to take rank and to distinguish themselves by some external sign which will prevent the gratis journals from imposing on the public.

Unveiling of the Tarnier Monument.—On June 1 the memorial erected by subscription to Tarnier was unveiled with appropriate ceremonies at Paris, Brouardel presenting the monument to the city. It is on the rounding projecting wall of the Tarnier clinic, facing the Place de l'Observatoire, and represents in bas relief Tarnier standing by the bedside of a young mother, who is clasping her babe in her arms. There is a suggestion of an incubator in the background. The bas relief is framed with columns and frieze above, like an ornamental portal. Above is the inscription, "Tarnier, 1828-1897." Below are the words, "To the master who consecrated his life to mothers and children, his colleagues, his pupils, his friends, his admirers."

Use of Anesthesia and Radiography in Medicolegal Testimony.—The Paris Society of Forensic Medicine recently appointed a committee to study this question. The report was to the effect that it is the right and the duty of the medicolegal expert to utilize anesthesia and radiography in his examination when indicated. At the same time he must bear in mind that neither is absolutely free from danger up to the present. He must not resort to them without discussing the subject with the examinee and obtaining his written consent. In case of his refusal to submit to these measures, the expert must state the fact in his report, but without drawing any conclusions, leaving it to the court to judge of the motives which instigated the refusal.

Antityphoid Inoculations.—THE JOURNAL mentioned on page 1569 the recent antityphoid inoculation of about 2,000 officers and men of a German regiment leaving for southwest Africa. The *Lancet* comments on these inoculations that the irony of fate has appointed that this regiment has been quartered in a station which is practically never visited by typhoid fever. This medical policy is on a par, it adds, with that in England when antityphoid inoculation was abolished in the army. Not only the inoculations were ordered suspended, but also the collection of data in regard to the later history of the many thousands previously inoculated. Antityphoid inoculation has been reintroduced into the British army, but the advantages of the previous experience were practically lost. The German committee in charge of the antityphoid inoculations regards the subject as one of national moment.

International Medical Association Against War.—Dr. J. A. Rivière is a Paris physician of English parentage who has made a specialty of physicotherapy. He was recently decorated by the French government, and the banquet tendered him by his friends on this occasion was presided over by Lancereaux, president of the Paris Académie de Médecine. As THE JOURNAL recently mentioned, page 1287, Rivière has organized an international medical association whose aim is solely to oppose the outbreak of any more wars. The membership is limited to physicians the world around, and they are urged to join this new and unique international association and lend their aid to a systematic crusade against further warfare. The membership dues are $1 a year. They may be sent to Dr. J. A. Rivière, rue des Mathurins 25, Paris, France. The medical journals of the world are asked to aid in the crusade against war by publishing the aims and proceedings of the association when fully organized.

International Congress on Accidents to Workingmen.—The first congress of this kind convened at Liège, May 29. Among the principal subjects discussed were the importance of hernia from the standpoint of industrial insurance and compensation for injury, and whether industrial poisoning should be classed with surgical injuries in respect to compensation. The membership list numbered 575 and a large English contingent was present. The French and Germans were particularly interested in the discussions of the "free choice" of a physician by the injured or sick workman. This is known as the "American plan," and is generally opposed by the accident and sickness insurance societies on the continent. Nuel's compromise was finally accepted and ratified by a vote of the congress. This provides for "free choice," while allowing the proprietor to have the case supervised by his accredited physician, and also provides for a disciplinary council to prevent abuses from the system. The importance of investigating the causes of an accident was emphasized by several speakers, especially the value of the testimony of the injured party. By this means it has proved possible to unearth and remedy various defects which have prevented recurrence of similar mishaps. The regulations in Holland during the last two years were commended. They provide for medical inspection of the causes of the accident, in consultation with an engineering expert to suggest changes in the machinery, etc., to guard against recurrence.

Epidemic Cerebrospinal Meningitis in Germany.—The committee sent from Berlin to study the epidemic in Silesia has made its report. In 29 cadavers examined the tonsils were found enlarged and also the lymph glands in the neck and the thymus. The nasopharyngeal space was always plugged with tenacious mucus, beneath which the walls were found red, swollen and edematous. The anterior portion of the nose was generally normal, but the accessory cavities were frequently affected. These findings indicate that the germ is inhaled and enters through the lymphatic apparatus in the upper air passages and finds its way thence into the meninges. The region of the sella turcica was always the first involved. The lymphatic disposition seemed to afford a special tendency to the disease, those children in the family being affected who presented this disposition, while the others escaped, and the cases always being most severe in such children. The total number of cases in the epidemic of Prussia to May 1 has been 1,935, with 994 deaths, and in the Oppeln district, to May 7, 1,955 cases, with 1,002 deaths. The disease seems to confer a certain immunity and the possibility of producing a curative serum is now being investigated. The summer weather, it was hoped, would arrest the epidemic, but this hope has not been realized to date. The lack of regulations permitting coercive measures for isolation of patients has contributed to keep the epidemic alive. A bill has been presented to parliament conferring drastic powers in this respect on sanitary officials and physicians in their attempts to curb the spread of transmissible diseases.

Fate of the Medical Accident Insurance Company.—A band of physicians in Belgium organized an accident insurance company a few years ago, to keep the profits of accident insurance in the hands of the profession. The founders pointed out how sickness and accident insurance companies wax fat on the exploitation of the medical profession, and they asked what was to hinder physicians from organizing and conducting such a corporation and profiting thereby. The Médicale, as the Belgian society is called, competes with other accident insurance companies on their own ground, not restricting its policyholders to the medical profession by any means. The central main office is at Liège, 4 place du Theatre. It has thriven well, and divided annually 15 per cent. of the surplus among the shareholders. A new law recently went into operation which made the reincorporation of the society necessary. The legal steps were taken last month when the shareholders and the profession at large were confronted with the absolute refusal of the authorities to accept the young society. This refusal, it is expressly stated, is "not based on any juridical consideration nor on any motive touching the intrinsic worth of the company," but no further explanation is vouchsafed. Eight of the eleven members of the committee having the matter in charge voted, it seems, against accepting the Médicale, qualifying it as a "powerful and dangerous syndicate of medical men." The *Gazette Méd. Belge* does not hesitate to ascribe this refusal to the lobbying influence of lay insurance societies, jealous of this invasion into their ranks. Physicians throughout the country are protesting against this humiliation and injustice, and some have even proposed to retire in a body from all the unremunerated official positions they now occupy. This radical step finds no support, but one medical society, on receipt of a request from the government to co-operate in a collective inquiry in regard to tuberculosis, with blank circulars to be filled out, sent them back unopened, stating their grievance as that the government in refusing to accept the Médicale places an entire class of the citizens of Belgium outside the pale of the law. It evidently wishes to impress on physicians that they must not do anything but practice medicine, and should not try to make money in any ways except those inherent in their profession. Consequently they protest against this decision, and respectfully regret that they are constrained to refuse their disinterested aid to the government under these circumstances.

LONDON LETTER.

Outbreak of Sore Throats Due to Infected Milk.

A severe outbreak of sore throats which occurred in Colchester during the second half of April has been traced by the health officer, Dr. Savage, to infected milk derived from a cow suffering from mastitis. The outbreak was confined to the western parts of the town and involved from 500 to 600 persons. The symptoms were those of septic sore throat, with much constitutional disturbance and high temperature. Bacteriologic examination showed that the disease was due to streptococci. Some of the cases clinically resembled diphtheria and could be distinguished only by bacteriologic investigation. The outbreak began about April 16 and ceased about April 29, but the greater number of cases occurred between April 20 and 25. Though many of the cases were severe, none were fatal. Females were attacked more frequently than males, and adults were more affected than children. Consideration of the possible causes led the health officer to suspect the milk. Of 140 cases reported, he found that 123, or 88 per cent., from all over the town were supplied with milk by one particular vendor, while of those from the part of the town specially affected no less than 96.6 per cent. were supplied from this source. House-to-house inquiries showed this even more clearly. In 57 houses supplied by this dealer there were 53 cases of sore throat, while in 217 houses supplied by other dealers there were only 13 cases. The implicated dealer obtained his milk from six farms, and it was found that one particular round was especially affected and that this round usually received the milk from one particular farm. The cows of the six farms were examined. One of the cows of the suspected farm had extensive mastitis and a number of cases of sore throat had occurred on the farm. All the cows on the other farms apparently were healthy. After the selling of the milk from this cow was stopped the outbreak ceased.

Cancer Research at the Middlesex Hospital.

The fourth report of the Cancer Research Laboratories of the Middlesex Hospital has just been published under the editorship of Dr. Lazarus-Barlow. The majority of the papers are statistical and are based on the extensive records of the hospital, which alone among the general hospitals of the metropolis makes special provision for cases of cancer. Dr. Lazarus-Barlow contributes a paper on cancer ages based on cases admitted to the hospital from 1746 to 1904. The age given is that on admission and probably approximately corresponds with the age at which the patient first observed the growth. The total number of cases comprises 2,073 males and 4,659 females. The following conclusions are drawn: 1. The mean age of the males was 55.2 years; of the females 49.9. 2. Cancer of the alimentary tract is about seven times as common in males as females, but this difference gradually and uniformly diminishes as the seat of the primary growth is lower in the tract. 3. The mean age of liability of males to cancer of the alimentary tract is 55 years; that of females 52.5 years; but in cancer of the liver and gall bladder the mean age of female patients is higher than that of males. 4. In males 80 per cent of all cancer affects the alimentary tract; in females 80 per cent. affects the generative organs, including the breast. 5. In both sexes the generative system tends to be affected earliest and the cutaneous system latest; the alimentary system occupies an intermediate position. 6. Cancer before the age of 35 is commoner in women than in men, and in both sexes shows a tendency to affect the generative tract. The second paper is on the sites of cancer and is contributed by Dr. Lazarus-Barlow and Dr. Gordon Taylor. An attempt is made to ascertain whether the general increase in cancer affects every organ or not. The statistics appear to show that an increase in the mortality from cancer has occurred in the alimentary tract, stomach, colon, and rectum and anus in both sexes; in the lip, tongue, floor of the mouth, cheek, and esophagus in males; and in the uterus and breast in females. On the other hand, there was a diminution in mortality from cancer of the lip, tongue, floor of the mouth and vulva in females, and from rodent ulcer and cancer of the skin in both sexes.

The Royal Institute of Public Health Congress in London.

The Royal Institute of Public Health will hold a congress in London, July 19-25. An elaborate program has been arranged both of social functions and scientific proceedings. Special arrangements have been made for visits to the following institutions: The Smallpox Diagnosing Station at South Wharf, and thence by ambulance boat to the Joyce Green Fever Hospital; the school at Swanley, where 300 cases of ophthalmia are under treatment. The children live in cottage homes and the treatment is carried on concurrently with their education; the Downs school, where 420 cases of ringworm are under treatment.

Pharmacology

ACETANILID MIXTURES.

Two weeks ago we published the official report of the Council on Pharmacy and Chemistry relative to certain acetanilid mixtures. It may be of interest to quote from the literature of some of these preparations. Incidentally it should be known that acetanilid is worth about 31 cents a pound, carbonate of ammonia about 15 cents a pound, and bicarbonate of sodium 3 cents a pound. Apparently, therefore, these preparations cost less than 5 cents an ounce, including packages, labels, etc., and yet sell at from $1 to $1.25 an ounce.

Phenalgin.

This week we reproduce from the advertising literature of the Etna Chemical Company some of the claims made for phenalgin. It will be remembered that in the published analysis of phenalgin the smallest amount found by any analyst was the amount specified. Judging from all the analyses made, it is probable that phenalgin contains more than 60 per cent. of acetanilid. This should be kept in mind when reading the following.

We have before us a so-called reprint of an article entitled "Physiological Effects of Phenalgin on Uterine Tissue. Alice B. Condict, M.D., Ludhiana, Punjab, India." [We fail to find any Dr. Alice B. Condict in late British or American medical directories, but a graduate of Chicago Homeopathic Medical College, 1883, of this name, at one time practiced in Orange, N. J. Whether or not this is the same individual we have no means of knowing.] On the first page is a reproduction of the title page of an esteemed contemporary as follows: "Annals of Gynecology and Pediatry, September, 1904, vol. xvii, No. 9." As we failed to find this article in the journal in question, we communicated with the editor and found that the article actually appeared in that journal, but in the advertising pages, a fact which was not hinted at by the phenalgin people. We quote from the reprint:

"With regard, however, to the use of phenalgin in time of difficult labor, we would wish to show that it does something more than simply relieve pain in the first stage of labor. That it has a specific action on the round muscle or sphincter of Os Uteri refuses to dilate and allow the fetal head to pass its the tension is overcome and the spasm relieved. * * * It is in such difficult cases, where from actual irritation of an inflamed Os Uteri, or from spasm of the fibers of the circular muscle, resulting from undue nervous tension, where the Os Uteri refuses to dilate and allow the fœtal head to pass its reluctant door, that phenalgin has a most benign and simple action that surpasses the skillfully handled rubber bags, or the many remedies that are so often useless.

"Even when valuable time has been wasted, and dangers from delay have caused exhaustion, so great that the worst may be feared, still, let not the Accoucher fear to use this benign remedy, while taking care to sustain the patient's failing strength by proper nourishment, remembering that phenalgin has a specific stimulating action on the tired heart. * * * "

The following testimonials from physicians are further illustrations of the remarkable powers claimed for this acetanilid mixture:

"Our Necessities in Practice, by O. Henley Snider, A.M., M.D., Atlanta, Ga." "One of the chief feelings of *consolation* in the employment of phenalgin lies in its safety, removing doubts or restless apprehensions of approaching depression, heart troubles, syncope or collapse, and this property renders its application preferable in almost or quite every disease accompanied with pain. * * * A Swede, engaged in merchandise business, was seized with nephritic colic of a most violent character. His groans were heard for blocks distant, and the painful agonies had set up a profuse but perverted perspiration. It was plain that life could last but a short time without relief. A chloroform liniment was freely rubbed over the right kidney, and the patient was given five-grain capsules of phenalgin with half-grain morphia sulphate. At the end of half an hour he was given another five-grain dose of phenalgin, and was left with a supply of five-grain doses to be taken a while before meals—t. i. d.—for a few days. He has never had another attack, though he has kept phenalgin on hand, taking a small dose when symptoms of approaching attack were thought to be felt. * * * This preparation has been proven to possess positive properties for dissolving and removing calculus formations, eliminating uric acid, and overcoming chronic or subacute irritations of the urinary tract. It has given happy results in some painful prostatic conditions, and in one case of agonizing chordee, where the sufferer had wished for relief for days, phenalgin relieved the patient, and thus aided in a cure.

"For Doctors by a Doctor, by Walter J. Hansen, M.D., St. Joseph, Mo." "Clarence R.——Struck on mastoid with rock; doctor called third day after accident at 7 p. m. Patient's temperature, 103, vertigo and vomiting, dull throbbing pain over mastoid. Mastoid opened and drained by doctor in kitchen, by lamplight without hospital electric light or trained nurse, phenalgin taking the place of the nurse, keeping the patient quiet and comfortable, used as often as necessary, and as long as necessary without the nose-bleed caused by acetanilid, or the habit caused by opium preparations." * * * [The reference to acetanilid is interesting in light of the fact that the analyses showed phenalgin to contain over 60 per cent. acetanilid.] "Mrs. F.—Pneumonia; temperature, 103-105, cough all the time, heart action irregular. Phenalgin in ten-grain doses every two hours, then five-grain doses every two hours for forty-eight hours." [Are we to believe that this patient, "with heart action irregular," received over five grains of acetanilid every two hours, over one dram of acetanilid in twenty-four hours, and lived?!!]

"Alcoholic Gastritis, by J. A. Hopheimer, M.D., late attending surgeon, Harlem Hospital Dispensary, New York." * * * "Phenalgin is a coal-tar product, and so combined with ammonia that, while its sedative action is marked, it exerts a tonic effect upon the heart; and its decidedly alkaline reaction makes it a valuable adjuvant in the treatment of these cases."

[Analysis of certain samples of phenalgin purchased in the open market in original sealed packages did not show ammonia, which may be due to carelessness in the preparation of the article, or to volatilization. Through the action of time and exposure small quantities of phenalgin remaining in the original vials have no ammonia odor and assume a yellowish color, evidently due to decomposition of the acetanilid into anilin by the alkalies present.]

We quote the following excerpts from the advertising descriptive literature distributed by the manufacturers: "Phenalgin, in ten-grain doses, gives prompt relief and induces refreshing sleep; and in nausea due to reflex causes, as in pregnancy or pneumonia, given in small doses, one or two grains dry on the tongue, it has completely controlled the attack. Phenalgin being slightly laxative [which of the constituents possesses laxative properties?], acting upon the liver and as a general glandular stimulant, is a valuable eliminant, thus being the opposite of opium and its derivatives or other analgesics; consequently its administration is devoid of the disagreeable after-effects to be expected when other drugs are given. No habit is ever acquired by taking phenalgin; this positive assertion is borne out by the most extensive clinical experience [?!] It supplants opium and its alkaloids. * * * Phenalgin may be given to great advantage from the beginning of the discomfort, and, indeed, it is often well to give it in anticipation. The relaxation produced is most satisfactory, and the sedation to the irritated nerves is most pronounced. Ten-grain doses may be very safely administered every two to four hours during the menstrual period, and it should be given preferably with hot water. It checks fermentation (sic) and depression, being rather a stimulator to the heart than otherwise. Its tendency is also in a direct and gentle manner to arouse the secretions, being mildly laxative. It can thus be safely administered as a steadying agent for the reflex disturbances of the heart. * * * Many of the nagging, aching pains of gout are lost sight of during the day, the mind being absorbed by manifold duties, but when night comes they assert themselves in a most potent way. Phenalgin will invariably relieve these pains, and, being alkaline and a gentle stimulant of secretions, it will assist in the removal of the cause."

Ammonol.

The manufacturers of ammonol, which the analyses showed to be, to all intents and purposes, almost identical with phenalgin, are more modest in their claims for its therapeutic value. They make a few statements, however, which most physicians will take *cum grano salis;* for example: "Ammonol —A destroyer of the plasmodium of malaria." [!!!] "It is an invaluable remedy in dysmenorrhea and in dyspeptic disorders, for the relief and permanent cure of gastralgia, hyperacidity of the stomach and atonic dyspepsia."

"Ammonol in Malarial Paroxysm, Cyrus Edson, New York; Reprint from the National Board of Health Magazine." [We are not familiar with the publication.] * * * This agent has for a long time been known favorably as a malarial remedy. It unlocks the secretions, stimulates and has a selective action on the liver and not unlikely is a destroyer of plasmodium of malaria. That ammonol is an effective germicide can readily be proved by its action on the disease when given as the sole treatment in cases of it. I find the treatment I have given as most certain, however, and I can not too highly recommend it."

Compare the two following statements taken from the advertising literature: 1. "The efficacy of ammonol in dysmenorrhea has been thoroughly tested by the medical profession. They have found that it relieves pain promptly and surely. They know that it is safe because the habit of taking it for any narcotic or stimulating effect can not be acquired and because, instead of depressing, it sustains the heart's action."

2. "With the cessation of pain the ammonol should at once be discontinued, as it is best not to accustom the system to its effects, as when it is actually needed its action will not be so marked." [No habit!!!]

The above is all advertising matter—reading notices, as it were—but we make no charge for inserting it. It reads well in connection with the analyses of the preparations which we published. This subject will be continued.

Council's Work Approved.

Resolutions presented to the House of Delegates of the Ohio State Medical Association by the Academy of Medicine of Cleveland indorsing the action of the American Medical Association in creating a Council on Pharmacy and in the work of that body relative to the question of proprietary medicines were adopted unanimously.

Association News

THE PORTLAND SESSION.

The following is quoted from the official program of the Portland session, now in press:

Program of Entertainments.

Tuesday Evening, July 11.

General reception and smoker with special program of entertainment and with refreshments, at the American Inn, Lewis and Clarke Fair Grounds, given to the members of the American Medical Association by the city and county, state and district societies. (Subject to change.)

Wednesday, July 12.

Trolley ride to Portland Heights, 7 a. m. Cars leave First and Washington Streets. Free to members and their families.

Afternoon—Ladies' entertainment.

Evening—Receptions at private residences.

Thursday, July 13.

Trolley ride to Portland Heights, 7 a. m. Same as Wednesday.

Afternoon—Ladies' entertainment.

Evening—Grand fête on Exposition grounds, with special program in New York State Building, music, dancing, fireworks, refreshments, etc.

Friday, July 14.

Columbia River excursion. Boats leave Ash Street dock at 8 a. m.

Detailed program will be issued by Committee on Arrangements.

General Meetings.

THE GENERAL MEETINGS WILL BE HELD IN THE ARMORY OF THE OREGON NATIONAL GUARD, TENTH AND COUCH STREETS.

Opening Meeting, Tuesday, July 11—10:30 a. m.

Call to Order—The President, John H. Musser, Philadelphia.

Prayer—Rev. A. A. Morrison.

ADDRESSES OF WELCOME.

On behalf of the State of Oregon, by Governor George E. Chamberlain.

On behalf of the City of Portland, by Mayor Dr. Harry Lane.

On behalf of the Oregon State Medical Society, by the President, George F. Wilson, M.D.

On behalf of the City and County Medical Society, by the President, H. W. Coe.

Report of Committee on Arrangements—K. A. J. Mackenzie, Portland.

Introduction of the President-elect, Lewis S. McMurtry, Louisville, by the retiring President, John H. Musser, Philadelphia.

Address of the President—Lewis S. McMurtry, Louisville.

Tuesday, July 11—7:30 p. m.

Oration on Medicine—Charles G. Stockton, Buffalo, N. Y.

Oration on Surgery—John Collins Warren, Boston.

Wednesday, July 12—7:30 p. m.

Oration on State Medicine—George Blumer, San Francisco.

Memorial Address on Dr. Nathan Smith Davis—Henry O. Marcy, Boston.

New York Special to Portland.

Through the strenuous efforts of Drs. Frederick Holme Wiggin and Wisner R. Townsend of New York, and Dr. Cyrus Lee Stevens of Pennsylvania, a goodly number of physicians will leave New York June 24, for their forty-day trip. The train will consist of five sleeping cars, a dining car, a composite car and a baggage car. The itinerary of this train, as well as of all other special trains, was given in the special illustrated "Portland Number" of The Journal, June 3, pages 1761 to 1779.

Marriages

John A. Junck, M.D., to Miss Lydia Albers, both of Sheboygan, Wis., June 3.

James E. Casey, M.D., to Miss May Evelyn Leahey, both of Detroit, Mich., June 7.

Archibald McIntyre, M.D., to Miss Julia Mullins, both of Marion, S. C., June 7.

Quintain Cooper, M.D., to Miss Ollene Hulett, both of Columbia, Mo., June 9.

Nathan T. Beers, M.D., to Miss Isabel Lockwood, both of Brooklyn, N. Y., June 19.

Herbert T. Barnes, M.D., Chicago, to Miss Olive Morefield of Elkhorn, Wis., June 7.

Ambrose J. Gallison, M.D., to Mrs. Mima A. Holmes, both of Franklin, Mass., June 6.

Frederick A. Erb, M.D., Minneapolis, Minn., to Miss Jessie Cribb of Milwaukee, June 20.

William McDowell, M.D., to Miss Virginia L. Coburn, both of Seattle, Wash., June 6.

S. L. Barnett, M.D., Arnold, Miss., to Miss Josephine Patterson of Shivers, Miss., June 7.

R. Claude Foster, M.D., Argenta, Ark., to Miss Minnie Lou Graham of Lonoke, Ark., June 4.

Clay McKittrick, M.D., to Miss Ella Whisman of Washington, Ind., in Illinois, Dec. 25, 1904.

Cyrus Knapp Merriam, M.D., to Miss Miriam Hooper Tannalt, both of Spokane, Wash., June 6.

Franklin Petry, M.D., Thayer, Ind., to Miss Elva Amy of Wheatfield, Ind., at Rensselaer, Ind., June 5.

Lela Nell French, M.D., and Prof. Carl C. McClelland, both of Benton Harbor, Mich., June 7.

Maurice S. Davis, M.D., Lexington, Ky., to Miss Olga Rosenberg of Louisville, June 15.

Claude C. Crum, M.D., Jeffersonville, Ind., to Miss Myrtle Emery of New Albany, Ind., June 22.

Robert Ballantine Sweet, M.D., to Miss Maud Emma Clark, both of Clarion, Iowa, June 14.

William F. Work, M.D., Charlestown, Ind., to Mrs. Belle Graham of Jeffersonville, Ind., June 20.

William F. Jones, M.D., McCook, Neb., to Miss Martha Anna McNish of Norfolk, Neb., June 14.

Floyd M. Baldwin, M.D., North Muskegon, Mich., to Miss Cora A. Moulton of Ashton, S. D., June 13.

Arthur C. Blaine, M.D., Brunswick, Ga., to Miss Emma Christine Lundin of Richmond, Va., June 14.

John Hancock Fuchsius, M.D., to Miss Martha Louise ... glehardt, both of New York City, June 14.

Theodore B. Pearson, M.D., Louisville, Ky., to Miss Ethel Lewis Dunham of Jeffersonville, Ind., June 21.

Otto C. Crawford, M.D., Stone Creek, Ohio, to Miss Ada Viola Kinsey of Oldtown Valley, Ohio, June 4.

Henry Albert, M.D., Iowa City, Iowa, to Miss Edith Whiteis of Urbana, Iowa, at Iowa City, June 10.

William R. Watterson, M.D., to Miss Catherine Curran, both of Pittsburg, Pa., at Allegheny, Pa., June 20.

William Fred Acker, M.D., Monroe, Mich., to Miss Mildred Hoag Crane of Grand Ledge, Mich., at Detroit, June 7.

Deaths

David Dennison Stewart, M.D. Jefferson Medical College, Philadelphia, 1879, a member of the American Medical Association; a member of the Philadelphia College of Physicians and Surgeons; physician-in-chief to the Episcopal Hospital; a specialist of acknowledged power in neurology, died at his home in Philadelphia, June 3, after a second operation for appendicitis, aged 46.

Edward Newhall, M.D. Harvard University Medical School, Boston, 1848, a member of the Massachusetts Medical Society, and for many years consulting physician to the Lynn (Mass.) Hospital, died at his home in Lynn, June 12, from senile debility, after an invalidism of nine weeks, aged 82.

Martin Luther Chambers, M.D. New York University, New York City, 1871, vice-president of the First National Bank, Port Jefferson, Long Island, N. Y., and once president of the local board of education, died suddenly from heart disease, at his home in Port Jefferson, June 12, aged 62.

William E. Maloney, M.D. University of Vermont Medical Department, Burlington, 1887, some-time city physician, councilman and alderman of Keene, N. H., and representative for two terms, died at his home in Keene, June 1, after an illness of two years, from consumption, aged 40.

Richard G. Turner, M.D. Medical Department of the University of Louisiana, New Orleans, 1860, of Houston, Texas, assistant surgeon and surgeon in the Confederate service during the Civil War, died at the home of his son in Houston, June 8, after an illness of eight weeks, aged 65.

Louis James Sutton, M.D. University of Maryland School of Medicine, Baltimore, 1855, who practiced for many years in St. Mary's County, Md., died at the home of his daughter in Hyattsville, Md., June 11, from injuries received in a bicycle accident a year before, aged 73.

William Randolph Chalker, M.D. Medical College of the State of South Carolina, Charleston, 1878, a member of the board of aldermen of Lake City, Fla., and local surgeon for the three railroads intersecting at that place, died June 2, at his home, after a short illness, aged 57.

John H. Mullen, M.D. Jefferson Medical College, Philadelphia, 1867, assistant surgeon in the Twenty-eighth Pennsylvania Volunteer Infantry during the Civil War, died suddenly at his home in Bellefonte, Pa., June 3, from heart disease, aged 72.

Arthur H. Gardner, M.D. College of Physicians and Surgeons in the City of New York, 1898, died suddenly at his home in New York City, June 12, from poisoning by hydrocyanic acid, self-administered for the relief of chronic bronchitis, aged 37.

Gustave C. Vibrance, M.D. University of Minnesota College of Medicine and Surgery, of Watkins, Minn., a member of the American Medical Association, died at St. Luke's Hospital, St. Paul, June 10, from kidney disease, aged 33.

Charles W. Bush, M.D. Cleveland Medical College, 1854, in 1872 state senator and said to have been the author of the first medical practice bill introduced in California, died at his home in Los Angeles, June 8, aged 80.

John W. Williams, M.D. Medical College of Virginia, Richmond, 1864, of North Garden, Va., died at the University of Virginia Hospital, Charlottesville, from acute peritonitis after appendicectomy, June 11, aged 65.

Mordecai Yarnell, M.D. St. Louis Medical College, 1867, formerly gynecologist to St. John's Hospital, St. Louis, died at his home in that city June 10, after an illness of several months, aged 62.

Virgil Buell, M.D. Long Island College Hospital, Brooklyn, N. Y., 1871, for many years town clerk of Plainville, Conn., died suddenly in his office in that place, June 8, from heart disease, aged 57.

Joseph N. Black, M.D. Rush Medical College, Chicago, 1883, a member of the Adams County Medical Society, died at his home in Clayton, Ill., June 8, from an overdose of morphin, aged 45.

Sion H. Jurden, M.D. Toledo (Ohio) Medical College, 1897, of Clayton, Mich., died at his father's home near Lima, Ohio, after an illness of four months, from rheumatic endocarditis, aged 34.

Samuel Sylvanus Finkbinder, M.D. Jefferson Medical College, Philadelphia, 1865, died suddenly from heart disease at his home in Parkerford, Pa., June 11, aged 67.

John C. Hardy, M.D. Atlanta (Ga.) Medical College, 1892, was shot and instantly killed in a fight with the mayor and marshal of Chipley, Ga., June 9.

Francis Drummond Gilbert, M.D. Royal College of Surgeons, England, 1891, died at his home in Irvington, Cal., May 31, aged 85.

Queries and Minor Notes

Anonymous Communications will not be noticed. Queries for *this column must be accompanied by the writer's name and address*, but the request of the writer not to publish his name will be faithfully observed.

DECREASE IN VIRULENCE IN EPIDEMICS.

A. B. B. asks: "Is there a tendency in epidemics of certain diseases to become less fatal toward the close of the epidemic than in the beginning? If this is true, in what diseases has it been noticed?"

Answer.—Insofar as a search of treatises on epidemiology and various text-books of medicine shows, there is little of a statistical nature which permits of a satisfactory answer to this question. History points out that certain infections, e. g., syphilis and measles, are much more virulent when first introduced among a people or race, than at a later period when the disease has existed endemically for a long period of years. It is thought that the great European pandemic of syphilis centuries ago was much more virulent than the syphilis which is endemic in all civilized countries to-day. Iceland, naturally free from measles, was more than decimated by the epidemic of 1882-84, and the same is true of an epidemic in the Faroe Islands. The decrease in mortality in certain infections which has come about with time, as typhoid, syphilis, may in part be due to a gradual immunization of the race, but improved therapeutics may play even a more important part, as in diphtheria and typhoid. The variations in the virulence of different epidemics have been noted in connection with most acute infectious diseases, and these variations are most logically explained by variations in the virulence of the specific organism. In a given locality rather long periods often exist between two successive epidemics, and it is probable, or at least possible, that the organism causing the second outbreak is a different strain from that which caused the first. On clinical grounds it seems that the late pandemic of influenza was more virulent at its inception than later. In a Chicago hospital, which treated from 65 to 75 cases of typhoid fever in the summer of 1902, the mortality decreased from about 33 per cent. the first month to about 15 per cent. the second, and still less the third. In the typhoid epidemic of Winnipeg, Manitoba, from 1900 to 1904, the mortality has fluctuated from 6 per cent to over 10 per cent. in such a manner that the variations may be due to other causes than wide alterations in the virulence of the bacillus. In diseases having a seasoned or climatic distribution, measles, diphtheria, yellow fever, and to some extent typhoid, subsidence of epidemics is explainable on other grounds than decreased virulence of the organism.

MAY TAPEWORM INFECTION BE CAUSED BY DRIED BEEF?

In our reply to "Inquirer" in regard to the above question, published in this department, June 10, page 1872, we made an absurd blunder. Scores of letters have been received criticising the answer given, but we can give space to the following only:

Truxton, Ariz., June 14, 1905.

To the Editor:—In The Journal of June 10 "Inquirer" asks: "Can dried or 'jerked' beef infect the human alimentary canal with the tapeworm larvæ as does raw beef?" In reply, you speak of *trichinæ*, an altogether different organism. The question of the transmittal of tapeworm larvæ is one in which I have been and am greatly interested. During several years in the U. S. Indian service I have seen many cases of tapeworm. I believe it safe to say that fully 15 per cent. of the adult Sioux Indians on the Cheyenne River reservation, in South Dakota, have tapeworm, and it is not uncommon among the children. Nearly all of the beef consumed by these Indians is "jerked," though it is true the older Indians eat some raw beef. It seems to me that in the majority of these cases the larvæ must be obtained from the "jerked" meat. I have known cases to develop on the reservation among white people and half-breeds, who positively ate no raw beef. It is possible that the beef is not properly dried, especially in the fall. Among these people tapeworms cause grave anemia in some instances, and I think often pave the way for tuberculosis. I never miss an opportunity to warn them against underdone or raw meat, but the warnings are seldom heeded.

Albert L. Tilton, M.D.,
U. S. Indian Service.

Lincoln, Neb., June 14, 1905.

To the Editor:—In The Journal, June 10, p. 1872, there is an evident slip, since the question of your correspondent refers to tapeworm larvæ, or hydatid cysts, and not to trichinæ. Regarding trichinæ it may be said that the herbivores are infected with some difficulty and become infested with trichinæ only by artificial feeding with flesh containing the larvæ of this parasite, so that the chance of obtaining trichinæ from beef, under any circumstances, may be regarded as *nil*. So far as tapeworm larvæ are concerned, the duration of life of the beef tapeworm larva (*Cysticercus bovis*) is in any event short, and as the form seems to be rather susceptible to external influences, the processes in making dried or jerked beef would probably destroy the life of the parasite, especially if the beef were kept a short time. There do not seem to be experiments on record regarding this factor.

Henry B. Ward.

Randolph, Ohio, June 12, 1905.

To the Editor:—Is it not a fact that trichinæ are never found in beef, but in pork alone? Are they not the cause of trichinosis instead of tapeworm? You surely did not mean that tapeworm was caused by trichinæ. John J. Orton.

HOW TO USE THE INDEX.

Kenilworth, D. C., June 8, 1905.

To the Editor:—I am writing to you to ascertain something in regard to the index in The Journal. I am hunting for the record of a paper by Dr. E. F. Ingals, read before the American Medical Association, at Atlantic City, N. J., in the summer of 1904, entitled "A Method of Removing the Tonsils with Snare." On referring to index of Dec. 31, 1904 (Vol. XLIII, No. 27, page 2111), I find "Ingals, E. F., (130) 153, (9) 281, *1514." With the exception of page 1514 I can find nothing pertaining to this author. Can you tell me what these numbers refer to and where I can find the article desired? Frederick W. Didier, M.D.

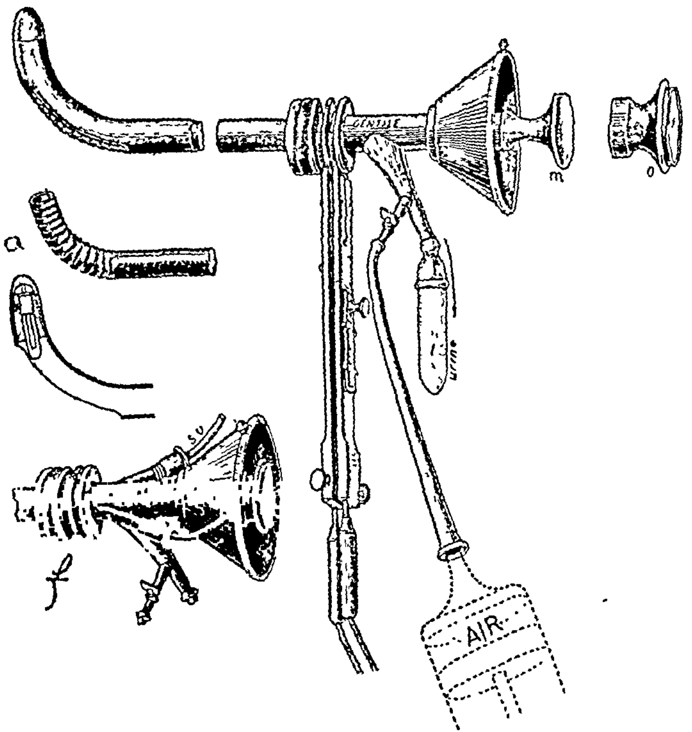
Answer.—One who consults any index, the size of which requires the use of abbreviations, will naturally begin by reading the "directions on the label." The "Explanation" of the Current Medical Literature Index of Vol. XLIII is at the beginning, on page 2076. Our correspondent apparently thinks he is using an index to "reading matter" in The Journal, but he refers to the Index to Current Medical Literature, a list of original articles published in the leading medical journals of the world. We will explain in detail the search for this article which our correspondent desires. Remembering from the "Explanation" that figures in parentheses refer to the numbered paragraphs and that all other figures are the numbers of pages, one turns first to page 153. Here, at paragraph 130 one finds the title of an article by Dr. Ingals, with the name and date of issue of the publication in which the article appeared. Since this is not the article desired, the next reference, (9) 281, is then looked up. Neither is this the article desired, and the only remaining reference is *1514 (the star meaning that this article appeared in full in The Journal). Our correspondent has already looked at page 1514, and has found that the article there given is not the one desired. This issue of The Journal, containing the index for January to June, 1905, gives opportunity to look further for the article. Turning to page 2063 of this issue, one looks up the various references under the name of the author until the reference to *386 is reached. Here is found the desired article, published in The Journal, Feb. 4, 1905. Incidentally one sees that the title of the article, "Tonsillectomy, Thorough, Painless and Safe" is slightly different from the one quoted by our correspondent above. This serves as a reminder that if one were looking for an article by title instead of by name of author, one should look for related words, lest one had failed to remember the exact wording.

Miscellany

Enterprise of Porto Rico Medical Society.—The little bulletin issued monthly by this society plans to index without comment the original articles in all its exchanges. The exchanges are then loaned to members on demand, and by this means the society has a catalogued circulating library of contemporaneous periodical literature with scarcely any expense. The editor is Dr. M. Ramirez of San Juan.

Necessity for Precautions Against Radium.—Mme. Curie mentioned some time ago that the apparatus kept in the same room with radium were affected by it, and those which could be injured by it soon became useless. A Swiss journal states that certain apparatus kept in the same room with some radium register now entirely different figures from those of two years ago. It has also been found that the influence of the radium is not restricted to the room, but extends throughout the entire building and many substances in it become radioactivated. The journal adds that, according to experiences to date, this saturation with radium will keep on increasing in intensity for two or three years, and that the subsidence will be so gradual that after forty years the intensity will be reduced only one-half.

Air Cystoscope.—F. Cathelin is *"chef de clinique"* at the Necker Hospital at Paris and is also widely known by his method of epidural cocainization for incontinence and by his intravesical urine segregator. He has now invented a cystoscope, for which he claims several advantages over the ordinary cystoscope in vogue. Its principal superiority is in the fact that the bladder is distended with air instead of a fluid, which renders the views much clearer. The guide is a flexible coil, shown at *a* in the illustration. The urine flows out spontaneously into the recipient *b*. From 20 to 100 gm. of air, previously sterilized with an alcohol flame, are injected with a Guyon syringe, and the bladder can then be inspected with ease. He remarks in his illustrated description of the new "air cystoscope" that he was able to see better in one hour with it than after a year's practice with the ordinary cystoscope. His article is published in the Paris *Tribune Médicale* for May 27, with 6 illustrations, of which the first is reproduced. The model with the openings for catheterization of the ureters, is shown at *f*.



State Boards of Registration

COMING EXAMINATIONS.

Medical Council of Pennsylvania, Philadelphia and Pittsburg, June 27. Secretary of the Medical Council, H. C. Shaeffer, M.D., Harrisburg.

Board of Medical Examiners, Central District, I. T., South McAlester, I. T., July 3. Secretary, B. W. Caldwell, Hugo.

Board of Medical Examiners of Arizona, Phoenix, Ariz., July 3-4. Secretary, A. Martin, Phoenix.

Utah State Medical Examiners, Salt Lake City, Utah, July 3-4. Secretary, R. W. Fisher, Salt Lake City.

North Dakota State Medical Examining Board, Grand Forks, July 5. Secretary, H. M. Wheeler, Grand Forks.

State Medical Examining Board of Washington, Seattle, Wash., July 5. Secretary, C. W. Sharples, Seattle.

State Medical Examining Boards of the Regents, State House, Concord, N H., July 7-8. Regent, H. C. Morrison, Concord.

State Medical Board of the Arkansas Medical Society, Little Rock, July 11. Secretary, J. P. Runyan, Little Rock.

Rhode Island State Board of Health, State House at Providence, commencing at 9 a. m., July 11. Secretary, G. T. Swarts, State House, Providence.

Wisconsin Board of Medical Examiners, Park Hotel, Madison, Wis., July 11. Secretary, F. A. Forsbeck, Milwaukee.

State of Connecticut Medical Examining Board, City Hall, New Haven, Conn., July 11-12. Secretary, C. A. Tuttle, New Haven.

Maine Board of Registration of Medicine, State House, Augusta, Maine, July 11-12. Secretary, Wm. J. Maybury, Saco.

Vermont State Board of Medical Registration, Y. M. C. A. Hall, Burlington, Vt., July 11-12-13. Secretary, W. Scott May, Underhill.

Kansas State Board of Medical Registration and Examiners, State House, Topeka, Kan., July 12-13. Secretary, G. F. Johnston, Lakin.

South Dakota Board of Medical Examiners, Sioux Falls, S. Dak., July 12-13. Secretary, H. E. McNutt, Aberdeen.

Board of Medical Supervisors, Washington, D. C., July 13. Secretary, Wm. C. Woodward, Health Department, Washington.

California State Board of Medical Examiners, San Francisco and Los Angeles, Cal., July 19. Secretary, C. L. Tisdale, San Francisco.

Louisiana May Report.—Dr. F. A. Larne, secretary of the Louisiana State Board of Medical Examiners, reports the written examination, held at New Orleans, May 4-5, 1905. The number of subjects examined in was 10; total number of questions asked, 50; percentage required to pass, 75. The total number of applicants examined was 98, of whom 89 passed and 9 failed. The following colleges were represented:

PASSED.

Tulane University, (1901) 83.2; (1904) 76.2; (1905) 91.6, 75.6, 82.4, 91.2, 90.8, 77.6, 87.6, 91.4, 88.6, 87.2, 91.6, 87.6, 87.2, 82.2, 86.8, 89, 81.2, 86.6, 80, 84.6, 90.6, 76.6, 84.6, 79, 95.2, 79.2, 90.4, 87.6, 82.4, 89, 91, 89.4, 89.6, 77.6, 91.4, 92.6, 83.6, 85.2, 83.8, 87.4, 89.4, 80, 90.4.

Memphis Hosp. Med. Coll. (1901) 83.2; (1903) 84.2; (1904) 88.8; 83.2, 80.4, 81.8; (1905) 79, 78.8, 76.6, 89.8, 86.6, 75.8, 78, 82.6.

University of the South, (1903) 78.2; (1904) 81.2, 93.4, 81.4, 87.6; 85.8, 72.4.

University of Nashville, (1896) 75.2; (1900) 88.2; (1905) 85, 88.8, 88.2, 81.8

Vanderbilt University ..(1894) 76 2; (1902) 75;	(1904)	85.2
Louisville Med. Coll.	(1905)	80.4
Woman's Med. Coll., Pa.	(1904)	80.4
Georgetown University	(1897)	88.8
College of P. & S., New York	(1893)	92.8
Fort Worth University	(1905)	77.4
Missouri Med. Coll.	(1898)	75.6
Maryland Med. Coll.	(1905)	89.8
University of Louisville	(1891)	86
Dallas Med. Coll.	(1904)	78.4
Med. Coll. of Alabama	(1893)	83.8
Jefferson Med. Coll.	(1904)	90.8
Hosp. Coll. of Med. Louisville	(1904)	78.2
Johns Hopkins University	(1903)	90
Harvey Med. Coll., Chicago	(1900)	84.6 (colored.)

FAILED.

Memphis Med. Coll. ..(1893) 63; (1899) 17.4*;	(1900)	16.4*
Louisville Med. Coll.	(1905)	67.6
University of Tennessee	(1880)	61.2
Kentucky School of Medicine	(1898)	67.2
Mebarry Med. Coll.	(1905)	66 6 (colored).

Flint Med. Coll. ....(1902) 63.6 (colored); 1901) 64.8 (colored).

*Retired.

Illinois April Report.—Dr. J. A. Egan, secretary of the State Board of Health of Illinois, reports the written examination held at Chicago, April 12-14, 1905. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 38, of whom 33 passed and 5 failed. The following colleges were represented:

PASSED.

College.	Year Grad.	Per Cent.
Amer. Med. Miss. Coll., Chicago	(1904)	80
Baltimore Med. Coll.	(1902)	78
Barnes Med. Coll., St. Louis	(1904)	78
College of P. & S., Chicago	(1901)	78
College of P. & S., New York	(1902)	89
College of P. & S., St. Louis	(1901)	[illegible]
Detroit, Coll. of Med.	(1892)	78
Hahnemann Med. Coll., Chicago	(1905)	78, 87, 84, 75
Illinois Med. Coll., (1905) 84, 79, 78, 89	(1904)	84
Johns Hopkins University	(1904)	86
Kentucky School of Med., Louisville	(1889)	81
Lincoln Med. Coll., Omaha	(1901)	83
Long Island Coll. Hosp., Brooklyn	(1891)	76
Meharry Med. Coll., Nashville	(1904)	82
Northwestern University	(1905)	88, 89
Rush Med. Coll. (1905) 86, 92, 89; (1903) 89;	(1899)	87
University of Louisville	(1891)	78
University of Pennsylvania (1904) 87, 81;	(1899)	87
University of Edinburgh, Scotland	(1891)	86

FAILED.

Dartmouth Med. Coll	(1881)	68
Hering Med. Coll., Chicago	(1904)	68
Hosp. Coll. of Med., Louisville	(1904)	52
Kansas City Med. Coll	(1903)	68
Keokuk Med. Coll	(1900)	69

Dr. Robert L. [illegible] Library
[illegible] Medical College
32450

The Public Service

Army Changes.

Memorandum of changes of station and duties of medical officers, U. S. Army, for the week ending June 17, 1905:

Kennedy, James H., asst.-surgeon, ordered to accompany troops from Benicia Barracks, Cal., to Vancouver Barracks, Wash., returning to station at U. S. Army General Hospital, Presidio of San Francisco.

Ewing, Charles B., surgeon, left Columbus Barracks, Ohio, with recruits en route to Vancouver Barracks, Wash.

Gorgas, William C., assistant surgeon general, and Straub, Paul F., and Shimer, Ira, asst.-surgeons, appointed members of a board of officers to meet at Ancon, Canal Zone, Isthmus of Panama, July 17, 1905, for the examination of medical officers to determine their fitness for promotion or advancement.

Lyster, Theo. C., asst.-surgeon, ordered to report in person to Col. Wm. C. Gorgas, president, examining board, Ancon, Canal Zone, Isthmus of Panama, for examination to determine his fitness for advancement to rank of captain.

Wadhams, S. H., Lyster, Wm. J. L., Persons, Elbert E., Bispham, Wm. N., Geddings, Edward F., and Rutherford, Henry H., asst.-surgeons, ordered to report in person on July 17, 1905, to Lieut. Col. George H. Torney, deputy surgeon general, at Army General Hospital, Presidio of San Francisco, for examination to determine their fitness for advancement to rank of captain.

Reilly, John J., asst.-surgeon, relieved from further duty at Jackson Barracks, La.

Robbins, Chandler P., and Gilchrist, Harry L., asst.-surgeons, ordered to report in person on July 17, 1905, to Major William H. Arthur, surgeon, president examining board, Army Medical Museum Building, Washington, D. C., for examination to determine their fitness for advancement to the rank of captain.

Allen, John H., asst.-surgeon, granted ten days leave of absence.

Porter, R. S., asst.-surgeon, leave of absence extended ten days.

Blanchard, R. M., asst.-surgeon, leave of absence extended twenty days.

Krebs, Lloyd LeR., asst.-surgeon, ordered to proceed from San Francisco, Cal., to Vancouver Barracks, Washington, as witness before a G. C. M.

Van Poole, G. McD., asst.-surgeon, granted thirty days' leave of absence.

Reynolds, Charles R., asst.-surgeon, left Army General Hospital, Washington Barracks, D. C., on ten days' leave of absence.

Webber, Henry A., surgeon, reported for temporary duty at Fort Stevens, Oregon.

Gibson, Robert J., surgeon, having reported at San Francisco, Cal., will proceed to and take station at Fort Logan, Colo.

Owen, Wm. O., surgeon, relieved from duty at Fort Logan, Colo., and on expiration of present sick leave will proceed and take station at Presidio of Monterey, Cal.

McCulloch, C. C., Jr., surgeon, assignment to the Presidio of Monterey, Cal., revoked and ordered to Fort Meade, S. Dak.

McAllister, John A., dental surgeon, ordered from Fort Rosecrans, Cal., to the Presidio of San Francisco, Cal., for temporary duty.

McCord, Donald P., contract surgeon, ordered from St. Louis, Mo., to Fort Rodman, Mass., for duty.

Stearns, Charles H., contract surgeon, granted leave of absence for one month.

Sievers, Robert E., contract surgeon, ordered from Fort Harrison Mont., to Fort Yellowstone, Wyo., for duty in the Yellowstone National Park during the tourist season.

Wythe, Stephen, contract surgeon, ordered from the Presidio of San Francisco to the Depot of Recruits and Casuals, Angel Island, Cal., for duty.

Watkins, Victor E., contract surgeon, ordered to return from Fort DuChesne, Utah, to his proper station, Fort Apache, Ariz.

Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending June 17, 1905:

Pryor, J. C., surgeon, detached from the Museum of Hygiene and Medical School, Washington, D. C., and ordered to duty as a member of the naval and medical examining boards, Washington, D. C.

Shook, F. M., asst.-surgeon, ordered to the Naval Hospital, Norfolk, Va.

Olsen, G. M., asst.-surgeon, ordered to the Naval Hospital, Philadelphia.

Guthrie, J. A., surgeon, discharged from treatment at the Naval Hospital, New York, and granted three months' sick leave.

Sutton, R. L., asst.-surgeon, discharged from treatment at the Naval Hospital, New York, and ordered to Washington, D. C., for examination for retirement and then home to wait orders.

Bogan, F. M., P. A. surgeon, ordered to the Naval Hospital, Yokahoma, Japan, for duty.

Rodman, S. S., P. A. surgeon, detached from the *Ranger* and ordered to the *Rainbow*.

Wikes, G. L., asst.-surgeon, detached from the *Solace* and ordered to the Naval Station, Cavite, P. I.

Ohnesorg, K., P. A. surgeon, detached from the Naval Museum of Hygiene and Medical School, Washington, D. C., June 20, and ordered home to wait orders.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending June 14, 1905:

Stimpson, W. G., P. A. surgeon, granted leave of absence for five days from July 5.

Rosenau, M. J., P. A. surgeon, detailed to represent the service at session of American Medical Association at Portland, Ore., July 11-14.

Blue, Rupert, P. A. surgeon, granted leave of absence for sixteen days from June 22, 1905.

Sprague, E. K., P. A. surgeon, granted leave of absence for one month from June 27.

Cumming, H. S., P. A. surgeon, detailed for duty on special Revenue-Cutter Service Board. Detailed to represent the service at session of Amelcan Medical Association at Portland, Ore., July 11-14.

Foster, M. H., P. A. surgeon, granted leave of absence for one month from June 11.

Wilson, R. L., P. A. surgeon, granted extension of leave of absence for seven days.

Francis, Edward, asst.-surgeon, granted leave of absence for seven days.

Altree, G. H., acting asst.-surgeon, granted leave of absence for thirty days from June 10.

Bailey, C. W., acting asst.-surgeon, department letter of May 10, granting leave of absence for twenty-six days, amended to read ten days from June 5.

Blain, A. C., acting asst.-surgeon, granted leave of absence for fourteen days from June 14.

Drew, A. D., acting asst.-surgeon, granted leave of absence for five days under Paragraph 210 of the Regulations.

Hunter, W. R., acting asst.-surgeon, granted leave of absence for ten days from June 11.

Simonson, G. T., acting asst.-surgeon, granted leave of absence for two days from June 11.

Walkiey, W. S., acting asst.-surgeon, granted leave of absence for two days under Paragraph 210 of the Regulations.

Carlton, C. G., pharmacist, granted leave of absence for one day from June 9, 1905, under Paragraph 210 of the Regulations.

Bierman, C. H., pharmacist, department letter of May 19, 1905, granting leave of absence for thirteen days from June 7, 1905, revoked.

BOARD CONVENED.

Board convened to meet at the Marine Hospital, New Orleans, June 13, 1905, for the physical examination of an officer of the Revenue-Cutter Service: Detail for the board: Surgeon A. C. Smith, Chairman; Assistant Surgeon F. H. McKeon, Recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, Public Health and Marine-Hospital Service, during the period from June 10 to June 16, 1905:

SMALLPOX—UNITED STATES.

District of Columbia: Washington, June 3-10, 2 cases.

Florida: Jacksonville, June 3-10, 1 case.

Illinois: Danville, June 1-8, 5 cases.

Indiana: South Bend, June 3-10, 16 cases.

Louisiana: New Orleans, June 3-10, 16 cases.

Massachusetts: Lowell, June 3-10, 1 case.

Michigan: June 3-10, Detroit, 2 cases; Grand Rapids, 44 cases, 2 deaths.

Missouri: June 3-10, St. Joseph, 5 cases; St. Louis, 3 cases, 1 death.

Nebraska: Omaha, June 3-10, 1 case.

New York: New York, June 3-10, 1 case.

Pennsylvania: June 3-10, Lebanon, 1 case; York, 3 cases.

South Carolina: Charleston, May 20-June 10, 1 case.

Tennessee: Memphis, June 3-10, 3 cases.

Wisconsin: May 26-June 10, La Crosse, 2 cases; Milwaukee, 5 cases.

SMALLPOX—FOREIGN.

Brazil: Rio de Janeiro, April 23-May 7, 26 cases, 12 deaths; Santos, April 9-16, 1 death.

Chili: Valparaiso, May 10, 15 cases daily.

China: Shanghai, April 30-May 6, 2 cases.

Ecuador: Guayaquil, May 11-18, 1 death.

France: Paris, May 20-27, 12 cases, 1 death.

Great Britain: May 20-27, Birmingham, 4 cases; Bristol 2 cases: Cardiff, 1 case; London, 1 case; New Castle-on-Tyne, 11 cases; Southampton, 1 case, imported from South Africa; South Shields, 1 case.

Italy: General, May 11-19, 40 cases.

Turkey: Constantinople, May 14-21, 2 deaths.

YELLOW FEVER.

Brazil: Rio de Janeiro, April 23-May 7, 96 cases, 35 deaths.

British Honduras: Belize, May 24-June 1, 4 cases, 4 deaths.

Ecuador: Guayaquil, May 11-18, 3 deaths.

Guatemala: Livingston, June 10, 1 case.

Honduras: Puerto Cortez, May 25-29, 5 cases, 3 deaths.

Panama: Colon, Jan. 23-May 31, 19 cases, 6 deaths; Panama, Jan. 1-May 31, 70 cases, 23 deaths.

CHOLERA.

Russian Empire: May 2-4, Ashabad, 1 case; Zarazyn, 1 case.

PLAGUE.

Africa: April 29-May 6, East London, 1 case; Port Beaufort, 2 cases, 1 death; King Williams Town, 2 deaths; Port Elizabeth, 1 case.

Brazil: Rio de Janeiro, April 23-May 7, 1 death; Sao Paulo, April 16-23, 1 death.

Egypt: Port Said, April 29-May 6, 1 death; Tukh, 4 cases, 3 deaths.

Peru: April 30-May 10, Callao, 1 case; Chiclayo, 1 case; Lima, 2 deaths; Mollendo, 4 cases, 2 deaths.

Medical Organization

Delaware.

Kent County Medical Society.—At its meeting in Dover, May 29, Dr. J. N. McCormack addressed this society on the benefits of organization.

Sussex County Medical Society.—Dr. J. N. McCormack addressed this society at Georgetown, May 30, on the importance of standard medical organization.

New Castle County Medical Society.—At the meeting of this society, May 27, Dr. J. N. McCormack spoke of the advisability of an organization of both schools of medicine, discussed the public health problem, and advised that the authorities co-operate with the physicians to stop the pollution of rivers and streams.

Georgia.

Bartow County Medical Association.—Pursuant to call from Dr. Alfred T. Calhoun, Cartersville, physicians of Bartow County met at Cartersville June 6, to organize a county medical society.

Pennsylvania.

Schuylkill County Medical Society.—Physicians of the county met at Pottsville, May 24, and were addressed by Dr. J. N. McCormack on the subject of standard organization.

Lackawanna County Medical Society.—At the meeting of this society at Scranton, May 25, Dr. J. N. McCormack described the standard plan of organization and emphasized the value of the county medical society, saying that the national and state bodies were in session but a few days each year. It was the duty of the county society, he said, to further the three needs of the profession in the maintenance of a post-graduate school, a business club and a social club.

Wayne County Medical Society.—The physicians of Wayne County met at Honesdale, May 25, with an attendance from Scranton, Carbondale and other places in surrounding counties, and after a free discussion of the subject by Drs. Cyrus L. Stevens, secretary of the State Medical Society of Pennsylvania; J. N. McCormack, Bowling Green, Ky., and others, a county society was organized on the standard plan, and officers were elected as follows: President, Dr. Harold Cummings White, Ariel; vice-presidents, Drs. William T. McConville, Honesdale, and Atherton B. Stevens, South Canaan; secretary and reporter, Dr. Arnold C. Voight, Hawley; treasurer, Dr. H. B. Searles, Honesdale, and censors, Drs. T. W. Bortree, Winnwood; Arthur J. Simons, Newfoundland, and William A. Stevens, Hamlinton.

Society Proceedings

COMING MEETINGS.

American Medical Association, Portland, Ore., July 11-14, 1905.

Michigan State Medical Society, Petoskey, June 28-30.
American Climatological Association, Detroit, Mich., June 28-29.
American Surgical Association, San Francisco, Cal., July 5-7.
South Dakota State Medical Association, Deadwood, July 5-7.
Amer. Assn. of Life Ins. Exam. Surgeons, Portland, Ore., July 10.
American Medical Editors' Assn., Portland, Oreg., July 10.
Oklahoma State Medical Association, Guthrie, July 10-11.
American Urological Association, Portland, Ore., July 12-13.

WISCONSIN STATE MEDICAL SOCIETY.

Minutes of Meeting of House of Delegates, held at La Crosse, June 7, 1905.

FIRST SESSION.

The President of the Council, Dr. W. T. Sarles, in the Chair.

Reports of Councilors.

Reports of Councilors were received from the First, Third, Fourth, Seventh, Tenth and Twelfth Districts.

Dr. H. B. Sears, of the First District, thought every legalized practitioner should become a member. Meetings should be made interesting, and outside talent occasionally invited to participate. License reciprocity between states should be accomplished as speedily as possible. Insurance against malpractice suits might be desirable.

DR. F. G. NYE, of the Third District, had met with some pessimistic opposition, but the outlook is bright. Outside physicians have difficulty in understanding the reason for existence of county medical societies. Earnest endeavor to get fully attended meetings is desirable.

DR. T. S. LAWLER reported that the general condition of the Fourth District is fairly good. The fee-bill is an important question. The society hopes to have four meetings a year, two of them social.

DR. BOOTHBY, reporting for the tenth district, said there was a slight gain in membership. An annual sanitary meeting to which prominent citizens, boards of health, etc., should be invited, would be desirable. The fee-bill might be considered by members unofficially, inviting non-members to participate.

DR. A. T. HOLBROOK's report showed the conditions in Milwaukee county to be excellent.

Members Need not Resign from Sectarian Societies.

DR. W. T. SARLES, of the Fifth District, spoke of the importance of admitting to membership in the county society, those who are licensed by law to practice medicine, but who are affiliated with Homeopathic or Eclectic societies. An annual business meeting of the county society should be held. Outside talent should occasionally be called on. About four meetings a year is all the average county can stand.

DR. A. W. GRAY suggested the advisability of passing a resolution declaring eligible to membership in county societies, all who under the law are qualified to practice medicine.

DR. W. H. WASHBURN presented the following resolution, which was adopted:

Resolved, That it is the sense of the House of Delegates of the Wisconsin State Medical Society, that eligibility to membership in county societies shall not require physicians to relinquish their membership in their sectarian, local or state societies.

The secretary said that he had received reports from sixty-two secretaries, which he considered a promising indication; that there were grounds for belief in the ultimate success of the new plan; membership has increased, better work along scientific lines is being done, and the morale and *esprit du corps* of the profession are rapidly advancing to a higher plane.

Thursday, June 8, 1905.

SECOND SESSION.

DR. W. H. WASHBURN was elected delegate, and Dr. A. H. Levings, of Milwaukee, alternate, to the American Medical Association, for two years.

A committee of three to name ten men from whom the governor shall make selection of a member of the State Board of Medical Examiners, was appointed by the president.

A proposition and communication were submitted from the *Wisconsin Medical Journal* to renew contract for printing proceedings at rate of $1.20 per member.

This proposition was referred to the council with recommendations that it be accepted, and contract awarded at rates specified, if the finances of the society will permit it.

Friday, June 9, 1905.

THIRD SESSION.

There being a balance of $1,129.10 due for expenses of getting the medical quackery bill passed and for other legislation, a resolution was passed directing the secretary to request aid from county societies in paying the amount. Arrangements were afterward made looking to the immediate settlement of the indebtedness.

Election of Officers.

The election resulted as follows: President, J. R. Currens, Two Rivers; vice presidents, A. W. Gray, Milwaukee, A. Gunderson, La Crosse, and W. E. Fairfield, Green Bay. Councilors, First district, H. B. Sears, Beaver Dam; Second district, G. Windesheim, Kenosha. Program Committee: Arthur J. Patek, Milwaukee, chairman; Fred T. Nye, Beloit, and the secretary, ex officio. Committee on public policy and legislation, G. E. Seaman, Milwaukee; J. J. McGovern, Milwaukee; W. T. Sarles, Sparta.

Place of next meeting, Milwaukee.

Dr. Byron M. Caples of Waukesha, was named as delegate to the American Medical Association meeting as delegate-elect and alternate-elect could not go.

A congratulatory telegram was sent Drs. Dinsdale, Powell and Noble for their work in connection with medical legislation.

General Session, Fifty-ninth Annual Meeting, June 8, 1905.

The President, DR. C. W. OVIATT, in the Chair.

President's Address.

The morning session was devoted to preliminary matters, and the afternoon session was opened with the address of the president on "The Responsibility of the General Practitioner in Relation to Surgical Diseases." He said that this is not fully recognized. There should be a prompt recognition of cases which are strictly surgical, particularly acute surgical infections and malignant disease. Appendicitis and cancer demand early operation. In cases of too long delay, death should be charged to the procrastinating physician rather than to the surgeon. An early exploratory incision is often indicated in suspected cases of cancer of the stomach.

Ectopic Pregnancy.

DR. W. C. F. WITTE, Milwaukee, said the etiology is still in doubt. Gonorrheal inflammation is supposed to be a frequent cause. Tubal is the most frequent form of ectopic pregnancy, but many of the cases are atypical and difficult of diagnosis. To-day it is generally admitted that the proper treatment is surgical. The mortality rate should not be above 10 per cent. The secret of success lies in the management of the placenta. In operating, the abdominal route is generally preferable.

DISCUSSION.

DR. C. H. LEMON, Milwaukee, said the differential diagnosis may be difficult as between appendicitis, other pelvic inflammations and recent abortion. Immediate surgical intervention in urgent cases, and ultimate surgical interference in all cases is indicated.

DR. JOHN SPECHT, Superior, urged early diagnosis and immediate operation.

DR. MALONE, Milwaukee, said that the comparative rarity of the disease is the reason why it is sometimes incorrectly diagnosed, though its symptomatology is no more obscure than that of appendicitis. An exploratory incision is sometimes advisable.

DR. J. R. MINAHAN, Green Bay, advised against the use of an anesthetic in diagnosing this condition. Where a woman has gone over her periods, has symptoms of miscarriage, and is seized with severe pain in abdomen, followed by shock and symptoms of internal hemorrhage, open the abdomen.

DR. C. O. THIENHAUS, Milwaukee, said that an examination under narcosis is dangerous. If the physician has no surgical aid at hand, he can open the abdomen and check the bleeding by means of a clamp on each side of the broad ligament, and then await surgical aid.

DR. EDWARD EVANS, La Crosse, exhibited specimens illustrating rare cases of true ovarian pregnancy and of incipient tubal abortion.

DR. R. G. SAYLE, Milwaukee, declared it impossible to make a differential diagnosis, in all cases of ectopic pregnancy, from appendicitis. Severe examination, with or without anesthesia, is inadvisable. Nothing should delay operation.

DR. JULIUS NOER, Stoughton, described two cases of mistaken diagnosis of ectopic pregnancy.

DR. WITTE advised repeated examination only in suspected unruptured cases. Abdominal incision (not vaginal) should be employed.

The Permissibility of Medical Abortion.

DR. W. E. FAIRFIELD, Green Bay, stated that medical abortion is sometimes justifiable. It does not open the door to criminal abortion. If, as opponents admit, we are justified in removing the sac after abdominal section in extrauterine pregnancy, thus indirectly causing the death of the fetus,

Sufficient Evidence of Cause of Glaucoma.—The First Appellate Division of the Supreme Court of New York says that the plaintiff in the personal injury case of O'Neil vs. Metropolitan Street Railway Co., a woman 61 years of age, who was the principal of a public school, and whose eyesight had been remarkably good, was, through the negligence of the defendant, precipitated to the pavement with considerable violence, landing on her head and left shoulder so that she sustained a scalp wound an inch and a half in length nearly on top of her head, above her left ear, and her left collar bone was fractured. There was evidence indicating that she was stunned, and that her eyesight immediately became blurred; also, that immediately after the accident she had such intense pain in her eye and in her head between the wound and the eye that she did not feel the injury to the collar bone, and continued to have these pains constantly until shortly before the trial, when she had them at intervals of two or three weeks. The fracture of the collar bone united and healed in about three weeks, and she was afterward able to resume her duties as principal of the school. But about fourteen months after the accident occurred she began to have special trouble with her eye, and within the next few weeks consulted two eye specialists, one of whom operated for glaucoma, and during the operation discovered a subluxation of the lens, which, in his opinion, was sufficient to account for the glaucoma, and, in his opinion, caused it. The court is of the opinion that the testimony of the plaintiff, showing a continuity of pain in this eye since the accident, supported and sustained by the medical testimony introduced in her behalf, fairly sustained the finding of the jury that the glaucoma of the left eye resulted from the injuries she received through the negligence of the defendant. It was undisputed that the glaucoma in the left eye destroyed the sight of that eye and communicated to the right eye, ultimately resulting in permanent total blindness, and, the court holds, the defendant being responsible for the plaintiff's total blindness, it needed no argument to show that a verdict for $13,580 damages was not excessive.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

American Medicine, Philadelphia.

June 10.

1 *Treatment of Chronic Diarrhea. R. W. Wilcox, New York.
2 *Observations on Amebas Infecting the Human Intestine with a Description of Two Species, Entameba Coli and Entameba Dysenteriæ. C. F. Craig, San Francisco, Cal.
3 Dysentery in Cook County Hospital. C. G. Grulee and J. S. Welch, Chicago.
4 *Bacterial Element in Catharsis. G. Walsh, Chicago.
5 Lloyd Reaction for Morphin and Other Alkaloids. D. W. Fetterolf, Philadelphia.
6 *Sign of Value in Splenic and Hepatic Disease. T. H. Evans, Philadelphia.

1. **Treatment of Chronic Diarrhea.**—Wilcox urges that diarrhea being a symptom, the cause, which may be mechanical, nervous or hemic, always should be ascertained. The treatment of the mechanical forms of diarrhea is based primarily on removing the cause of the irritation. This is accomplished by freeing the alimentary tract from all substances likely to cause increased peristalsis. This, in the dyspeptic form of mechanical irritation, is accomplished by a full dose of castor oil. If there is proteid in indigestion the process can be checked by resorcin, six grains, four times daily, to which 20 minims of tincture of nux vomica should be added if there is diminished motor function of the stomach. After a few days give three drops of strong nitrohydrochloric acid, or 10 drops of hydrochloric acid with one twentieth grain of strychnin sulphate, in the midst of each meal. In amylaceous indigestion, thorough mastication of starchy food, limitation of fluids with their ingestion, and the administration of diastase, in 15-grain doses, an hour after meals, will generally correct the difficulty. The use of sodium bicarbonate Wilcox considers improper in all gastric and in most intestinal indigestions. Magnesia ponderosa in 10-grain doses after meals meets all indications. If bile pigment is present in the stools a combination of salicylic acid, 6 grains, with the same amount of acid sodium oleate, with 4 grains of phenolphthalein and one-half grain of menthol may be given once daily, for several days. Fecal impactions are best relieved by softening them by quart injections of warmed olive oil, or 1-dram doses of arsenic-free sodium phosphate twice daily; 1/100 grain of physostigmin salicylate three times daily, to enable the intestinal muscle to recover its tone. Opium is only admissible when the alimentary canal has been thoroughly emptied, to check excessive peristalsis. It should be given hypodermically, as morphin, in substantial doses, and not repeated. A prescription for opium, or any of its preparations or alkaloids, should never be trusted to nervous patients. There is too great danger of habit formation. The tannin preparations are sometimes useful by temporarily inhibiting the action of bacteria and their toxins. Bismuth naphtolate, bismuth tribromophenolate and bismuth tetraiodophenolphthaleinate are more effective.

2. **Amebas Infecting the Human Intestine.**—Craig summarizes his observations as follows:

> 1. The intestine of man may be infected with two varieties of amebas, one pathogenic (*Entamœba dysenteriæ*), and the other non-pathogenic (*Entamœba coli*). 2. *Entamœba coli*, the non pathogenic variety, is found in 65 per cent. of healthy individuals studied, and in 50 per cent. of individuals suffering from diseases other than dysentery, if a saline cathartic has been administered. 3. These organisms can be easily distinguished in both fresh and stained specimens. 4. They differ widely in their method of reproduction, and this is the most important method of distinguishing them. 5. *Entamœba dysenteriæ*, whether fed in milk or injected through the rectum, produces in kittens the typical lesions of amebic dysentery as observed in man. 6. In kittens, *Entamœba coli*, whether fed in milk or injected through the rectum, is absolutely harmless. 7. Neither feeding experiments nor rectal injections of fecal material or the bacteria occurring in such material produces any of the lesions of amebic dysentery, unless *Entamœba dysenteriæ* is present.

4. **Bacterial Element in Catharsis.**—Walsh calls attention to the fact that we have every reason to believe that the increase in peristalsis, the increase of gas formation, and the liquefaction of feces which follow the use of cathartics is due to the same cause which produces the infections of the intestine, an exaltation in bacterial activity. He emphasizes the fact that while cathartics differ in effects, these differences are only relative and the evidences on clinical grounds of a common agency of force are overwhelming. The following classification of cathartics is proposed: 1. Cathartics which produce a convulsion of activity amongst our intestinal bacteria by the production of an effusion of warm blood serum into the lumen of the gut. 2. Cathartics which act by means entirely unknown to us at the present time.

6. **Sign of Value in Splenic and Hepatic Disease.**—Evans describes a method uniting both palpation and percussion. The abdominal walls should be relaxed, the lower extremities slightly flexed on the abdomen, and the leg on the thigh. The patient should open the mouth, breathing lightly through it. The physician gently plunges the fingers of one hand into the abdominal wall at the level of the anterior or lateral costal margin, and rather under the osseous curtain of the same. With the fingers of the other hand he firmly percusses over the supposed site of the organ, spleen or liver to be examined. Very delicate sense in the percussion hand will discover a variation of resistance, according to the state of the underlying organ, for the retaining hand secures the liver or spleen, as the case may be, between itself and the superior structure, the diaphragm. The more valuable result is the sensation derived from the parenchyma striking the retaining fingers, which are pressed into the abdominal wall. With a little experience the peculiar shades of consistency of the spleen or liver will make themselves readily perceptible. Any enlargement accompanied by softening or rigidity should be easily distinguished. In cases of typhoid this method is successful for the early diagnosis of splenic variations.

Medical Record, New York.

June 10.

7 *Contribution to Hemophilia, with Special Reference to the Joint Symptoms of the Disease. F. P. Kinnicutt, New York.
8 *Etiology of Fissure in Ano. J. R. Pennington, Chicago.
9 Early Diagnosis of Pulmonary Tuberculosis. G. R. Pogue, Greeley, Colo.
10 *Encephalomeningocele. W. D. Haggard, Nashville, Tenn.
11 Is Craniotomy on the Living Child Ever Justifiable? I. Marx, New York.

12 *Gunshot Wounds of the Abdomen. J. E. Cannaday, Pt. Creek, Va.
13 *Cushion Diseases. J. D. Potts, St. Louis, Mo.

7. **Hemophilia.**—An abstract of Kinnicutt's article was published in The Journal, May 27, 1905, but the abstract did not set forth the author's views as to the therapeutics of this disease. They may be summarized as follows:

1. The internal administration of the lime salts, especially of the chlorid of calcium, in doses of two grams (30 grains) twice or thrice daily. Its continued use should be interrupted every two or three days by a period of twenty-four hours. The salt is soluble in 1.5 parts of water and is well borne by the stomach. 2. The application of solutions of the same salt, with compression, for accessible surface bleedings. Aqueous solutions of .5 per cent. are efficient. Another convenient mode of employment is in the form of a finely powdered chalk mixed with .5 per cent. solution of the calcium chlorid. The less soluble lime salts, such as calcium phosphate, are equally efficient for local application. 3. The use of a combination of .5 per cent. solution of calcium chlorid and one-sixth volume of a solution of nucleo-albumin, for local application. The nucleo-albumin can be obtained from aqueous extracts of various cellular tissues—testicle, thymus, thyroid, ovary, etc. If the prepared extracts are not available, a supply may be procured readily by mincing any of these tissues in a weak alkaline solution (1-500 solution carbonate of sodium) and filtering through gauze after a few minutes. 4. The application of a stream of carbonic-acid gas to the bleeding surface, in accessible hemorrhage. Its inhalation, freely mixed with ordinary air or oxygen, in concealed hemorrhage. 5. The use of 4 per cent. solution of cocain hydrate for surface bleedings, and also of adrenalin (1-,1000) with compression.

8.—See abstract in The Journal, Nov. 12, 1904, p. 1490.

10. **Encephalomeningocele.**—Haggard's patient, aged four months, reacted well after the operation, but died unexpectedly on the ninth day. The temperature had not been above 100 for the four days preceding, and for two days previously the only conspicuous symptom was a lateral nystagmus. The tumor measured 17 inches by 23, and weighed five pounds.

11. **Is Craniotomy on Living Child Ever Justifiable?**—Marx says that other things being equal, considerations of religion weighing strongly and more often than not absolutely determining the result, he favors the mother as compared to the unknown fetus when asked to allow the mother to suffer an increased risk. Only in rare cases is a Cesarean section on a woman many hours in labor after manifold efforts to deliver in the presences of a suffering fetus, to be considered as more conservative than a skillfully performed craniotomy. The sphere of craniotomy is limited, but it must and ought to be extended. The positive contraindication to the operation is furnished by absolute contraction of the pelvis either from bone approximation or through obstruction by a tumor mass. The treatment here should be early induction of abortion, if the demand is made, or elective Cesarean section at or near term. The absolute and relative indications for perforation are discussed.

12. **Gunshot Wounds of Abdomen.**—Cannaday points out the difference in effect on the tissues between the old style low velocity ball and the modern projectiles, which latter are less apt to be deflected in their course through the body, and produce neat, clean-cut perforations which are easily sutured and heal rapidly. Although the greatest risk of infection in abdominal wounds comes from perforation of the hollow viscera and the subsequent contamination of the peritoneum, there is danger from the projectile itself, for, contrary to common belief, the heat generated in firing does not in any sense destroy bacteria, and the missile easily becomes infected en route by contact with clothing, skin, etc. In these wounds occurring in civil life, when the wound of entrance can be shown to have penetrated the abdominal wall and the services of an experienced surgeon are promptly available, laparotomy indications are imperative as a rule, regardless of symptoms. In war, however, when operative action often comes late and must be carried out under adverse conditions, it has been found that the conservatism of inactivity is the saner policy. The technic of such operations is described.

13. **Cushion Diseases.**—Potts calls attention to the harmfulness of soft, warm, cushioned seats, which he considers productive of certain disorders of the perineal region. The warmth of the perineal structures in contact with the cushions is increased, and the function of the sudorific follicles and sebaceous glands is stimulated to greater activity. The inability of the secretions to escape by friction or evaporation must sooner or later result in maceration and exfoliation of the epithelial layer, and infection by some one of the ever-present pathogenic bacteria will result as soon as the integrity is broken. Depletion of the blood vessels of the parts, while under pressure, must be followed by more or less congestion. Deranged nutrition ensues, and the foundation of many disease processes is laid in the injured parts. Potts has observed three classes of diseases, in which he regards the soft cushions as the chief etiologic factor. The first of these has its seat in the integument, or beneath the integument of the perineum and perineal regions, and embraces such well-known diseases as eczema simplex, eczema marginatum, intertrigo, erythema simplex, pruritus ani, and tegumentary and subtegumentary abscesses. The second class has its seat in the mucous membrane and submucous tissue, and embraces such disorders as simple urethritis, simple proctitis, anal ulcers, etc. The third class has its origin in the blood vessels and glands, and includes such diseases as hemorrhoids, papillomata, adenomata, etc. Prophylaxis consists in the use of the old-fashioned hard-bottomed seat or one with a cushion so firm that the tuberosities can not sink down into it. The treatment of the three forms of cushion diseases is described in detail.

Boston Medical and Surgical Journal.

June 8.

14 *Surgery of Renal and Ureteral Calculi. A. T. Cabot, Boston.
15 *Cases of Renal and Ureteral Calculi at the Boston City Hospital. J. H. Cunningham, Boston.
16 *Results of Cases Operated on for Stone in the Kidney, Massachusetts General Hospital, from 1897 to 1904, inclusive. H. Cabot, Boston.
17 Notes on Operations for Renal and Ureteral Stone. P. Thorndike, Boston.
18 Diagnosis of Renal and Ureteral Calculi. B. Tenney, Boston.
19 Aids to Diagnosis of Renal Calculi Obtained Through Examination of the Urine. H. F. Hewes, Boston.

14. **Surgery of Renal and Ureteral Calculi.**—Cabot reports on nine cases of ureteral calculus. In all the stone was so fixed in the ureter that it was hopeless to expect it to be moved along by natural forces. The experience in two cases teaches that the extreme lower end of the ureter is the point at which stones are arrested most frequently (six of the nine cases). When a stone is caught at this point there is a considerable chance of dislodging it by manipulation. The ureter in such cases should be stripped from above downward as thoroughly as possible. In a thin person this can be done through the abdominal wall with considerable effect. In a woman, vaginal manipulation of the lower end of the ureter should also be done thoroughly, and in man the rectal touch should be essayed. If a stone in the ureter can not be dislodged by manipulation over the ureter it must be reached in some other way.

15. **Id.**—Cunningham has collected from the records of the Boston City Hospital 48 cases of renal calculus in 19 of which the patients were operated on, and one case of ureteral calculus in which the patient also came to operation. The renal cases in which the patients were not operated on had either passed gravel or stones and presented physical evidence of calculi in the kidney, or the diagnosis was made on the rather typical history, confirmed by physicial examination. The age of the patients varied from 6 to 65 years. Thirty-seven were males and 11 were females. In 46 cases the stone was unilateral; 33 occurring on the right side and 13 on the left side, and in 2 cases it was probably bilateral. Of the 19 cases in which operation was done the analysis of the stone showed the following composition: Uric acid, 3; calcium oxalate, 1; uric acid and calcium oxalate, 1; calcium phosphate, calcium oxalate and triple phosphate, 1; character not determined in 13. The *x*-ray was employed in 10 cases. Stone was demonstrated in 7 cases and this was confirmed at operation. In the 3 cases which showed no calculus by the *x*-ray the patients were operated on, and in 2 stones were found. There were 3 deaths among the 19 patients. The lumbar incision was employed alone in 17 cases; in 2 an exploratory laparotomy was performed as a preliminary measure. Of the 3 fatal cases, 1 patient died from shock within the first twenty-four hours, 1 died from extensive suppuration and insufficient amount of kidney substance; the third died from hemorrhage. Subsequent observations were obtained in 7 cases: (The figures have reference to the case number.)

1. The renal fistula persisted during the patient's life, otherwise the patient was in good health and comfort, and lived more than twenty years after operation. 2. The patient lived for three years after operation, and until a short time before death, was in a good condition and in comfort. Death was believed to be due to presence of calculus in the other kidney. 3. Patient known to be in good health and without recurrence of former symptoms at the end of two years after operation. 4. Patient known to be in good health and without recurrence of former symptoms at the end of two years after operation. 5. Renal fistulæ persisted for eight months and then closed; the patient's condition was excellent at the end of one year after operation. No recurrence of symptoms up to that time. 6. Patient in good health and without recurrence nine months after operation. 7. In good health and without recurrence six months after operation.

16. **Stone in Kidney.**—Cabot discusses the results of 26 cases of stone in the kidney. The operations done in this series were nephro- and uretero-lithotomy, and nephrectomy. The cases of nephrectomy were 3 in number; were done on kidneys largely destroyed and containing large calculi, and were all followed by complete and, to date, permanent recovery. Nephrotomy was done 27 times, on 21 patients, with 4 deaths. Ureterolithotomy was done once, with one death. In the 27 nephrotomies stone was found, and removed in 21. In 6 cases stone was not found at operation, but in 4 it was passed a few days after operation, and the patients have since been well. Two patients have continued to have stones form and pass, apparently unaffected by the operation. In one case the stone was found at a subsequent operation and was presumably present at the first. In this series of 26 cases, with 33 operations, there were 6 deaths, 2 from extensive suppuration, 1 from an insufficient amount of kidney substance, 2 of uremia and 1 as the result of secondary hemorrhage. Of the 20 patients who survived the operation, 13 have either been seen or have been communicated with recently. Of these 13, 10 have been entirely relieved and are well to date. With the remaining 3 the situation is as follows: One was a case of large double calculi, in which two operations were done, separated by an interval of a few months. The patient has been entirely relieved of pain, from which he suffered for years, but still continues to have a purulent urine and occasional attacks of irritability of the bladder. One patient still has pain, referred to the bladder and prostate, for which no cause has been found. There has been no recurrence of pain or bleeding from the kidney. One patient continues to have pain in the kidney and to pass gravel at irregular intervals, as before operation.

Medical News, New York.

June 10.

20 *Mosquitoes of Florida. H. Byrd, Jacksonville, Fla.
21 Suicide; Its Consideration from a Medical Standpoint. R. W. Parsons, Ossining, N. Y.
22 Immigration—the Medical Examination of Immigrants and What the Nation Is Doing to Debar Aliens Afflicted with Trachoma. G. W. Stoner, New York.
23 "Sore Throat" as Caused by Systematic Conditions. N. G. Ward, Philadelphia.
24 *Medicinal Treatment of Affections of the Thyroid Gland. C. R. Grandy, Norfolk, Va.
25 *Very Simple Method to Locate the Stomach. M. I. Knapp, New York.
26 *Drainage After Laparotomy. L. A. Ewald, New York.

20. **Mosquitoes of Florida.**—Byrd describes eight genera of mosquitoes found in Florida. There are eleven species of culex, five of anopheles; one of stegomyia—the fasciatus; one of janthinosoma—the mucisa; and several other less important families which bring the total number of species now known in Florida up to twenty-two. Byrd says that the time is coming when the toleration of mosquitoes will be a municipal crime. He describes the life history of the more important in detail.

24. **Treatment of Thyroid Gland Affections.**—Grandy says that when the symptoms of disease of the thyroid are not too urgent thyroid extract and iodin should be tried in cases in which the secretion of the gland is diminished, and rest treatment and blood from thyroidectomized animals in cases in which the gland is secreting excessively. If these measures are of little avail, and the symptoms demand it, the surgeon should be called in immediately to partially remove the gland.

25. **Simple Method of Locating the Stomach.**—In the method described by Knapp the patient sits or stands and with the abdomen freed from clothing but not uncovered, as uncovering the abdomen soon chills it. The physician's hand must not be too cold. He must wait for about half a minute to allow the cold of the stomach to spread to its overlying skin. All that is necessary is to have the patient drink a glass of cold water, wait for about half a minute, and then to put a hand on the patient's bare abdomen. This method is available only for a short period after the patient drinks the water, because soon the cold area extends to the adjacent structures, thus widening the cold zone; again, the cold water in the stomach soon warms up.

26. **Drainage After Laparotomy.**—Ewald considers it a settled question that drainage is no longer indicated in the so-called unclean cases when a considerable quantity of non-infectious material finds entrance to the abdominal cavity. In 17 cases out of 257 laparotomies in which pus found entrance to the abdominal cavity through rupture of a tumor, no drainage was employed. Sixteen made prompt recovery; the other patient died on the third day of septic peritonitis, the result of a ruptured pyosalpinx. Two of the cases were purulent ovarian cysts; 15 were cases of pyosalpinx, each one of which was of from seven to nine months' duration. Drainage was considered in all of these cases, but was not instituted. In malignant tumors that are not only partially extirpated or when a portion of the cyst wall remains, Ewald considers drainage not only entirely unnecessary, but even dangerous, because it may cause secondary infection, rapid disintegration and sepsis. The patient can best be guarded against infection by: 1. Thorough careful indication for operation and operative procedure. All those patients who show a severe infection with high temperature and other symptoms should be operated on only when operation is made necessary by *indicatio vitalis*, and then a preliminary vaginal incision should be made. Pus located intraperitoneally or in the parametrium is highly infectious. 2. Through selection of proper time for operative procedure. Pus from a pyosalpinx is sterile after nine months. When no immediate indication for operative interference exists, it is better to wait. 3. Through careful observance of the following preventive measures: Protection of the abdominal cavity with layers of gauze; careful separation of adhesions; removal of all visible pus; exact hemostasis, and rapid operative procedure.

New York Medical Journal.

June 10.

27 The Modern Doctor. A. Jacobi, New York.
28 *Hypodermatoclysis. W. P. McIntosh, Portland, Maine.
29 Observations on the Diagnosis and Treatment of Herpes Zoster. D. M. O. Robinson, New York.
29½ *Therapeutic Value of Marmorek's Antituberculosis Serum. A. J. Richer, Montreal.
30 *Orbital Sarcoma, with Report of a Case and a Discussion of Radical Operation, X-Ray Therapy, and Electrochemical Sterilization. G. O. Ring, Philadelphia.
31 Detection of Methyl Alcohol. H. Scudder, New York.
32 Experiments of Sauerbruch in the Field of Esophageal Surgery. D. Stetten, New York.
33 Case of Traumatic Aphasia. C. Phelps, New York.

28. **Hypodermatoclysis.**—From experiments and observations which he has made, MacIntosh attempts to prove that the use of saline solution by hypodermatoclysis causes a decided increase in both the erythrocytes and leucocytes, and that it stimulates the ductless glands to increased activity. The strength of the salt solution used by MacIntosh was the so-called normal physiologic, which is 0.6 per cent., although recently he has been using a 0.9 per cent. solution. A number of cases cited illustrating the good effects of this procedure, such as hemorrhage and shock, uremia, typhoid, pneumonia, anemia and puerperal eclampsia. In these it often saves life and always does good. MacIntosh also found it excellent in rheumatism and in infectious diseases generally, although he does not consider it a remedy for everything.

29½. **Value of Marmorek's Antituberculosis Serum.**—Of seven advanced cases of tuberculosis in which the patients were treated with this serum by Richer and reported by him in September, 1904, four patients have kept up to their improved condition. Since then he has submitted to this treatment cases of incipient pulmonary tuberculosis, and the results have been uniformly good. In some instances, improvement was very marked within forty-eight hours, accompanied by corresponding modifications in the physical signs. In no single instance did any untoward symptom become manifest. Usually he inoculates 10 c.c. during the course of three days, giving 2 c.c.

the first day and 4 c.c. each subsequent day. Then follows a period of rest of at least ten days, sometimes fifteen, then he proceeds as before until 50 c.c. have been injected. After an examination of the patient, if the results are good, Richer believes it to be wise to continue the inoculations every month, one of 50 c.c. being administered for four or five months in order to keep the passive immunity conferred by the antitoxin.

30. **Orbital Sarcoma.**—Ring reports a case of orbital sarcoma in a girl, aged 6. From a study of this case the following deductions are made: The difficulty in accurate diagnosis under certain conditions entirely justifies an exploratory excision with removal of a section of growth for microscopic study, said exploration likewise serving to determine the classification of the tumor. The brilliant results achieved by a number of accurate observers in the field of Roentgen ray therapy justify the immediate tentative application of the method before any radical operation is attempted. If unsuccessful in removal of the growth, the virulence of the latter will probably be decreased and the dangers of metastasis lessened. If the sarcoma is encapsulated, operative intervention without orbital evisceration promises a successful outcome. In view of the almost constant recurrences after orbital evisceration, the removal of the growth itself is regarded as sufficient unless the periosteum or bony wall is involved. The encouraging results reported from the cataphoric sterilization of malignant growths in other parts of the body seem to warrant the utilization of this method in the orbit, due care being exercised as to the strength of current used.

St. Louis Medical Review.

June 3.

34 *Paravaginal or Abdominal Operation in Carcinoma of the Uterus. G. Gellhorn, St. Louis, Mo.

Lancet-Clinic, Cincinnati, Ohio.

June 10.

35 Out-Door Treatment of Pulmonary Tuberculosis. B. F. Lyle, Cincinnati.
36 Infection on Transportation H. M. Bracken, Minneapolis, Minn.

34. See abstract in The Journal, June 17, p. 1956.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional *general interest*.

British Medical Journal.

May 27.

1 Notes on 600 Cases of Typhus Fever. F. Robinson and E. T. Potts, Liverpool.
2 * [illegible] Treatment of Trypanosomiasis. H. W. [illegible]
3 Case of Cerebrospinal Meningitis; Lumbar Puncture; Recovery. J. Donelan, London.
4 Sodium Salts of the Com[illegible] as Therapeutic Agents. G. T. Morga[illegible]
5 Two Cases of [illegible] and Paralysis in Young Subjects, Ass[illegible] Erythema. T. K. Monroe, Glasgow.

2. **Treatment of Trypanosomiasis.**—Thomas presents the results of his experiments in the treatment of trypanosomiasis with an anilin compound which is said to contain 37.69 per cent. arsenic, and which is claimed to be 40 times less *toxic than* Fowler's solution. Thomas states that it is especially suitable for either subcutaneous or intravenous administration as it produces no necrosis, no pain, and very much higher doses of arsenic can he given without producing toxic results.

The Lancet, London.

May 27.

6 Clinical Illustrations of Angina Pectoris and Pseudoangina. [illegible]ndon.
7 T[illegible] Infection. F. J. McCann, London.
8 *Report of 100 Consecutive Abdominal Hysterectomies (Attended with Recovery.) J. B. Sutton, London.
9 *Pneumococcal Sore-throat with Notes of a Fatal Case. W. Pasteur, London.
10 Resemblances Existing Between the Plimmer's Bodies of Malignant Growths and Certain Normal Constituents of Reproductive Cells of Animals. J. B. Farmer, J. E. S. Moore and C. E. Walker.
11 Acute Aortitis. W. Broadbent, London.
12 A Regulating Chloroform Inhaler. A. G. Levy, London.
13 Purulent Ophthalmia and the Treatment by Argyrol. G. E. Wherry.
14 *Man Poltophagic or Psomophagic. H. Higgins, London.
15 Visit of British Physicians and Surgeons to Paris; a morning at Hotel Dieu. E. Owen, London.

8. **One Hundred Consecutive Abdominal Hysterectomies.**—Throughout this paper Bland-Sutton uses the term sub-total hysterectomy in place of supravaginal hysterectomy as signifying the removal of the body of the uterus with a variable portion of its neck. He considers this change of terms a desirable one, for the operation which has given him the best results is not quite what would be called a panhysterectomy, yet it is something more than is usually covered by the phrase supravaginal hysterectomy. He says that the careful study of the subsequent course of patients after supravaginal hysterectomy led observant operators to notice that those patients did best in whom the supravaginal cervix had been most freely removed; as a matter of fact, in the majority of his operations classed as supravaginal hysterectomy the only part of the uterus left is the vaginal portion of the cervix, and after the operation is completed the united surfaces of the peritoneum merely appear as a slightly raised ridge across the pelvic floor, so that a surgeon inspecting the operation area from above would imagine that a total hysterectomy had been performed. On the other hand, if the cervix be examined from the vagina six months after the operation it will appear natural to the eye and touch. This is a matter of importance, as the operation in no way impairs the pelvic floor or hinders the function of the vagina. For this method the term in familiar use among Parisian surgeons, "sub-total hysterectomy," is peculiarly suitable. The morbid conditions of the uterus which rendered radical operation necessary in Bland-Sutton's patients fall into five groups: Fibroids and adenomyoma, 81; cancer, 4; sarcoma, 1; chronic inflammatory disease of the uterus, 4, and fibrosis, 10 cases; these causes indicate the widening scope of hysterectomy. In 81 patients fibroid hysterectomy was performed for tumors, including 2 cases of the remarkable disease known as diffuse adenomyoma of the uterus. The commonest condition which induced these patients to submit to operation was profuse and long-continued bleeding from the uterus. The age of the patients varied from 27 to 69 years. Out of a total of 81 hysterectomies for fibroids, 13 of the patients had reached the age of 50 years and upward, and in each of them it was necessary to perform a serious operation for a disease which is generally believed to become harmless about the forty-eighth year of a woman's life. In addition to the 81 patients from whom the uterus was removed for fibroids and diffuse adenomyoma, there were 8 women in whom myomectomy or enucleation was performed, and one woman, aged 28 years, from whom a large soft fibroid weighing 14 pounds was removed from the round ligament of the uterus. This tumor grew into the abdomen like a subserous stalked fibroid. Each of these patients made an uninterrupted recovery. Myomectomy and enucleation are justifiable procedures in women contemplating marriage and in married women so anxious for offspring that they are willing to run serious risks on the chance of obtaining living children. Experience, however, teaches this stern lesson: After the enucleation of a fibroid in the procreative period of life a woman is 20 times more likely to grow more fibroids in the uterus than to conceive successfully.

9. **Pneumococcal Sore Throat.**—Pasteur says that the local signs of pneumococcal pharyngitis are in no sense distinctive. The membranous form may closely simulate diphtheria and a bacteriologic examination alone reveal the true nature of the case. Somewhat similar appearances are also met in some cases of streptococcal inflammation of the throat, but here the exudate is usually thinner and looser in texture and less adherent than in pneumococcal or diphtheritic inflammations. More reliance may be placed on the early symptoms and mode of onset. In pneumococcal sore throat the onset is usually quite sudden, often with rigor or chills, the initial symptoms are severe, and the temperature rises rapidly to 103 or higher —a grouping of symptoms strikingly like those of pneumonia and very rarely met with in anything like the same degree in diphtheria or even in streptococcal pharyngitis. The disease tends to run a short course—from two to five days—but to this there are exceptions. The erythematous form of the affection is most likely to be mistaken for scarlatinal angina and here the diagnosis—apart from bacteriologic findings—must rest mainly on the absence of other signs of scarlet fever

14. **Is Man Poltophagic or Psomophagic?**—Higgins says that the chief changes produced by poltophagy are, as regards appetite, it tends to become well defined at the commencement of a meal, as well as to cease as definitely at the end. There is a marked increase of pleasure in eating. The taste for simple food becomes more pronounced, preferences are more defined (if care be taken to study and to indulge them). The feces lessened in amount and are odorless; on those occasions in odor is present there is marked malaise and discomfort. rge intestine becomes smaller and the feces tend to re- a longer time in the bowel. In all cases it can be said that there is an extraordinary change in the general health, much more of the joy of living, increased power of work, and freedom from the infinitely troublesome concomitants of chronic disease.

The Practitioner, London.

June.

16 On Breathlessness, Especially in Relation to Cardiac Disease. *Sir Lauder Brunton.*
17 Cirrhosis of the Liver. R. Saundby.
18 The Bacillus Coli Communis as a Cause of Septicemia. T. Gillman Moorhead.
19 Valvular Disease of the Heart. I. Mitral Stenosis. R. Crawford.
20 The Separation of the Urine of Each Kidney. A Discussion of Recent Methods of Diagnosis in Urinary Surgery. J. W. T. Walker.
21 The Causes of Appendicitis. F. C. Bottomley.
21½. The Causation and Treatment of Appendicitis. J. Sherren.

Semaine Médicale, Paris.

22 (XXV, No. 21, May 24.) De l'appendicite chez les sujets agés (in the aged). R. de Bovis.
23 (No. 22.) De la persistance des sensations lumineuses dans le champ aveugle des hémianopsiques (in the blind area in the field of vision in hemianopsia). L. Bard.

Berliner klinische Wochenschrift.

24 (XLII, No. 19.) *Blood diseases and Balneology.—Blutkrankheiten und Balneologie. E. Grawitz.
25 Zur Frage der Differenzierbarkeit von Cholera- und choleraähnlichen Vibrionen mittels des Blut-Agars. C. Prausnitz.
26 *Quinquaud's Sign.—Zur Kenntniss des Q'schen Zeichens. H. Hoffmann and H. Marx.
27 *Zur Behandlung der Arteriosc[illegible]
28 *[illegible] d Com- [illegible] t [illegible]
29 *[illegible]). Immelmann.
30 Neuere Arbeiten [illegible] und Regeneration (scar formation and [illegible] Beitzke.
31 Nationale und [illegible] ziner-Kongresse (suggestions to improve medical congresses). W. Waldeyer.

24. **Blood Diseases and Balneology.**—The development of the lymphoid bone marrow in early childhood is favored by muscular exercise, and the lack of it induces a tendency to blood affections later in life. Grawitz cites this as one of the reasons why girls are more inclined to anemia and to chlorosis than boys. Appropriate prophylaxis from earliest infancy will prevent the development of serious blood affections later. Other factors that co-operate in the production of blood affections are chronic losses of organic juices, as in suppurations, also nephritis, hemorrhages and the influence of toxins. Iron and arsenic waters affect the blood favorably, and the climatic factors and exercise in the mountains are of benefit, although the supposed increase in the red corpuscles is now considered merely a mechanical phenomenon. One of the most important factors in climatotherapy and balneotherapy is the cure of the digestive disturbances, of the congestions and autointoxication. The idea that eggs and meat are particularly needed in anemic conditions is a mistaken one, as they increase the production of ptomains in the intestines. In his experience he has found a vegetable diet best for cases of severe anemia, giving animal albumin only in nutrient enemata, at least at first. The purgative waters and the rational dietetics at watering places benefit not only liver, stomach and intestinal affections, but also the serious anemic conditions.

26. **Quinquaud's Sign of Alcoholism.**—Hoffmann and Marx examined 1,018 persons for this sign. (It was described at length in The Journal, vol. xliii, p. 433.) They found it more reliable than they had anticipated from others' reports, and state that the absence of the sign renders the abuse of alcohol improbable, while its presence in a pronounced form points with more or less probability to the liquor habit. They found that the sign could be elicited experimentally. It consists in the sensation of light shocks when the tips of the fingers of the subject's hand are placed on the palm of the exami At first nothing is perceived, but then a series of slight cussions are noticed, as if the bones in the fingers knoc lightly against each other and against the palm support them. The sensation ranges from that of slight friction actual grinding and cracking.

27. **Treatment of Arteriosclerosis.**—Steinsberg pleads earlier treatment of arteriosclerosis, at the first sign of appearance, even in the young. It is the malady of civilizati and if physicians accustom themselves to look for it they be amazed at the number of young persons with the Cai sign of thickened, tortuous temporal arteries. During initial phases of the affection the arteriosclerosis may be garded as latent, and proper prophylaxis in this stage postpone its further development for years. Excessive phy cal exercise and the reverse, excessive sedentary occupatio overabundant diet, excessive ingestion of fluids, abuse tobacco and alcohol, all these *factors must be regulated, a* moderation should be preached in all things. Excess of me by ptomain production, and excess of vegetables by the lar amounts of lime, are both harmful. Reduction of the inta of salt is to be recommended, and ergot and potassium iod have also favorable effect. The latter renders the blood mo fluid. Carbonated baths and "cold rubs" are particular useful and never do harm. Their influence on the dilatati of the cutaneous blood vessels and on the vagus are facto of the greatest importance in treatment of arteriosclerosi They are of still more importance in prophylaxis. Bri baths have also a pressure-reducing action, and, in combination with carbonated baths, have often done good service.

28. **Balneotherapy in Complicated Heart Affections and Fai ing Compensation.**—Fisch analyzes the lessons learned fro long experience at Franzensbad. Ascending graduation the carbonic acid and chlorids in the balneotherapy, combine with rational gymnastics of the heart, possibly massage *the organ, both individualized to fit each case and to resto* compensation, are the main principles in treatment, he say although courses of mineral waters, diet, climate, rest in bed heart tonics, ice bags and puncture for relief of dropsy, al have their place. He relates a few cases in detail to illustrate his success in treating serious forms of cardiac diseas on these principles.

29. **Orthophotography of the Heart.**—Immelmann regard this method of examining the heart as a great progress. H gives several photographs thus obtained by direct, perpendicular projection. It is a modification of the orthodiagraph. Only those rays are used which fall perpendicularly on the object. The standard holding the tube moves parallel to the standard holding the photographic plate on the other side of the object, both tube and plate, with a diaphragm interposed, forming thus a single apparatus. The three parts are always parallel and always the same distance apart. The outline of the heart thus obtained differs materially from other radiograms, and his experience has shown that it is absolutely true to nature.

Deutsche medizinische Wochenschrift, Berlin and Leipsic.

32 (XXXI, No. 19 [illegible] ine klinische Studie auf Gr[illegible]. Noorden.
33 *Die Behandlung [illegible]
34 *Experimentelle [illegible] ng der Extraktivstoffe [illegible] (extractives of meat and gastric digesti[illegible]
35 *Transmission of Syphilis to Monkeys.—[illegible] tragung der Syphilis auf Affen. A. Neisser.
36 *Vaccine Germ.—Untersuchungen über das Wesen des Vaccineerregers. S. Prowazek.

32. **Carcinoma.**—König here summarizes the personal impressions in regard to carcinoma derived during his extensive experience. He believes that carcinoma is liable to grow at any point where there is epithelium, and nowhere else. For a certain length of time it is entirely a local affection. When the cachexia observed is due merely to the ulceration of the cancer, it may be cured by removal of the latter. Age affords a general predisposition to cancer, and this may be reinforced by a family tendency, trauma, irritation of an ulcer or increased glandular function, as in case of the mammary gland. He does not believe in the transmission of cancer from one person to another, although he admits the possibility of

34. Importance of Meat Extractives for Digestion.—Sasaki's experiments on dogs with a Pawlow fistula confirmed the assumption that ingestion of meat extractives shortly before a meal increased the secretion of gastric juice. The stomach mucosa reacted to the presence of the food taken in the meal afterward with a much more copious secretion of gastric juice, and it contained a larger proportion of acid than in the experiments without the previous dose of the meat extractives.

35. Transmission of Syphilis to Monkeys.—Neisser is at present in Batavia for the purpose of further work in this line. This article is the report of successful experimental research made before he left Germany. The principal problem is now, he remarks, to determine whether and where in the body of an animal sucessfully inoculated with syphilis, material for further inoculation can be found.

36. The Vaccine Germ.—This article issues from the Protozoa Laboratory of the Imperial Public Health Department, in charge of Schaudinn. Prowazek reports experiments on the eyes of rabbits, which have proved excellent material for study of the vaccine agent. The infection remains strictly localized, and generation after generation of the germs can be cultivated in the eye without inducing general infection. This localized organic cultivation offers unparalleled opportunity for study of the vaccine germ. He is convinced that the Guarnieri bodies are not the causal agents. The virus evidently does not develop like a protozoon, as inoculation at any time in a range of from 8 to 36 hours caused no appreciable difference in the length of the incubation period. The bodies which he calls "initial bodies," found along with Guarnieri bodies in the vaccine, resemble the Negri bodies in rabies. He gives details of the technic that show them best.

Münchener medicinische Wochenschrift.

37 (LII, No. 17, April 25.) *Left-Sided Pain in the Stomach.—Ueber den linksseitigen Magenschmerz. Riedel.
38 *Appendizitis und embolische Magenerkrankungen (stomach affections). E. Payr.
39 *Suction Mobilization of Ankylosed and Contracted Joints.—Mobilisierung versteifter und Streckung kontrakturierter Gelenke durch Saugapparate. R. Klapp (Bier's Clinic

pains, occurring after eating, and persisting for a few hours, then comes peace for months, followed by another attack, lasting possibly twelve hours, and recurring again after a shorter interval. The stomach begins to be sensitive, with oppression after eating, or perhaps there are attacks of pain. By dieting, the patient gets along for a few months, with perhaps an occasional attack of pains, and then he begins to vomit half an hour or later after meals. These symptoms recur with increasing frequency; the vomiting is purely reflex, as there is no question of stenosis. Finally, the pain on the left side becomes continuous and vomiting a daily affair. Others experience the pain almost continuously from the first, but are able to control it by a light diet. Two or three years may pass before they begin to vomit. The older the patient the more rapidly the ulcer develops, as a rule. When the ulcer becomes very extensive, symptoms of stenosis are noted and the stomach is liable to assume the hour-glass shape. Only once in his experience with thirty cases was pain noted in the back, near the eleventh rib. The left-sided pain is increased by inflation of the stomach, as the ulcer is stretched. In treatment the internal measures must be exhausted before surgical intervention is contemplated. The results of the latter are the definite restoration of the patient, as the process is not malignant. Riedel reviews his experiences with twenty-eight such patients treated by the operation. The ulcers were multiple in about half the number.

38. Appendicitis and Embolic Stomach Affections.—Payr has published various communications on the subject of embolism from thrombosis of the veins in the mesentery and omentum. This embolism may occur in the stomach or elsewhere, and his experimental research has shown that it is especially liable to accompany or to follow appendicitis. This is the explanation, he thinks, for the gastric hemorrhages, hemorrhagic erosions or small ulcers secondary to appendicitis, as also for perigastric adhesions and for cicatricial stenosis of the pylorus.

39. Suction Apparatus in Mobilization of Ankylosed Joints.—Klapp describes, in this article, the application of Bier's stasis hyperemia to ankylosed joints by means of suction apparatus combined with appliances inside the vacuum box, which act on the joint and allow movements of the joint while under the influence of the aspirating process. Illustrations of the apparatus devised for the knee and hand are given, the vacuum being created by an air pump. A rubber bag fits air-tight over an opening rubber bag downward into the box and it presses evenly on the limb. The pressure of the rubber bag on the bend of knee is so great that it expels the blood from the part, while the opposite side of the joint is treated with the stasis hyperemia induced by the suction of the vacuum. The pressure of the large rubber bag is uniform over the entire surface which it touches. The results with this apparatus have been extremely satisfactory, but Klapp reserves the details for a later communication.

44. **Functional Test of the Kidneys.**—Kapsammer thinks that time has proved the unreliability of the freezing-point test and also of tests based on intravenous secretion of the urine. Catheterization of the ureters is becoming more valuable every year, but of all the other means of determining the functional capacity of the kidneys none have survived except the indigo-carmin test (see The Journal, xlii, page 68), and the test with a warm solution of phloridzin. With the phloridzin test the conclusions are founded on the length of time before the phloridzin glycosuria becomes evident. If sugar can be found in the urine in from twelve to fifteen minutes after injection of .01 gm. phloridzin, this finding speaks for health or for good functional capacity. If it does not appear until half an hour, the kidney may be functionally affected, but capable of recovery, while non-appearance until later than thirty minutes indicates irreparable functional disturbance.

45. **Operative Treatment of Invagination.**—Israel describes his technic as free from danger, while it allows ample oversight of the invaginated intestine and resection of the desired amount, and absolutely prevents any fecal substance from finding its way into the peritoneal cavity. The part of the intestine containing the invaginatum is sutured to the parietal peritoneum. The invaginated portion is then drawn out through a long incision and resected into sound tissue. Two cases are described which confirm the advantages of this extraperitoneal technic. They demonstrate further that the portion of the lumen which had been mechanically constricted by the invagination recuperates and recovers its normal diameter spontaneously in time. He advises operating even on cancerous strictures by this extraperitoneal principle, first artificially invaginating the parts.

46. **Radical Treatment of Leg Ulcers.**—Schneiderlin reports a number of cases in which Wenzel's technic of circular incision of the limb in the lower third of the thigh was applied. This abolishes the incompetent superficial veins and forces the blood to seek the normal deep-lying veins. The results have been gratifying in every respect.

48. **X-Drain.**—Hofmann calls it the "wing drain." It consists of two flat drains crossed to make an X. The central part forms a single piece from which the four arms project at right angles, with a perpendicular tube from the center of the X. The shape of the drain prevents its slipping around or out through the incision.

Nordiskt mediciniskt Arkiv, Stockholm.

Last indexed page 1724.

49 (XXXVII. Internal Medicine, No. 4.) *Nobel Address. J. P. Pawlow.
50 *Studien über die senilen Rückenmarksveränderungen (changes in spinal cord). (Commenced in No. 3.)
51 *Sekundar-Infektion
52 *Ueber paroxysmale
53 Scandinavian Medical Literature, 1904.

49. **Pawlow's Address on Receiving the Nobel Prize.**—Pawlow remarked, in the course of his address, that the founder of the prizes gave him a considerable sum of money ten years ago to further his scientific research on the physiology of digestion. His achievements in this line are familiar to readers of The Journal. He summarizes the principal results here and outlines various fields of research which promise rich rewards for their cultivation. Among them is what he calls the "conditional reflexes," such as the secretion of saliva that follows the mere sight of food by a hungry dog. This excitation from a distance, without actual contact, differs from the ordinary saliva reflex in being so variable and conditional. Another difference is that in the ordinary reflex act the response in the saliva secretion is proportionate to the dryness, hardness or acidity of the object in contact with the mucosa of the mouth. In the "conditional reflex" the r sponse is determined by properties which have no physiolog bearing on it, such as the color, for instance. By combinin this "signal conditional reflex" with stimuli applied to oth parts of the body, various paradoxical combinations are o found. It seems to be evident that the point in the centr nervous system which is more strongly excited during a d rect stimulus, draws to itself the weaker excitations, read ing the other points of the nervous system from without. I other words, the direct, unconditional reflex creates a tem porary, casual route for all the other stimuli from without and thus collects and conducts them to the central point fo this reflex. The conditions governing the opening or closing of this route are the physiologic foundation for the most delicate capacity of adaptation manifested by the animal organism, and will well repay study.

50. **Senile Changes in the Spinal Cord.**—Rodhe's comprehensive study of the anatomy, etc., of senile changes in the spinal cord concludes with a discussion of their clinical importance. As a rule, the changes are slight, and even where they are extensive, the symptoms are generally masked by other senile processes in the organism, mostly cerebral. He has found 18 cases on record, however, in which the anatomically demonstrated senile alterations in the spinal cord dominated the clinical picture. They include some of Gower's simple senile paraplegia and some of Dana's chronic senile paraplegia, with a few of spastic paresis, the gait having a spastic character, and terminating in Demange's contracture. When lax senile paralysis appears early, it is hard to differentiate it from a syphilitic spinal cord affection. The spastic form is also liable to simulate lateral sclerosis or the combined or circumscribed forms, or even compression of the spinal cord or progressive muscular atrophy. The lack of pronounced cerebral symptoms and of apoplectic symptoms the very gradual development of the symptoms, the pains and in the later stages, the comparatively rapid course, the extension of the contractures, the sphincter disturbances, the tendency to decubitus—all these speak in favor of a senile process. His bibliography includes a number of inauguratio theses and American works.

51. **Secondary Infection in Tuberculosis.**—Thue summariz his research in the statement that examination of 288 tube culous persons, all febrile but 57, has demonstrated that tu berculosis alone, without any secondary infection, is able t induce the complete clinical picture of true phthisis; also th every kind of fever may be found represented in pure tube culosis. His findings further established that a secondar infection may become installed shortly before death, after long course of pure tuberculosis. In 11 cases he found ev dences of recent endocarditis.

52. **Paroxysmal Tachycardia.**—In regard to the essence c this affection, Fischer thinks that any judgment is prema ture as yet. The evidence seems to favor the assumption o slight disturbances of a vasomotor or trophic character, pos sibly due to defective nutrition of the nerves in the medull or heart from interference by processes of sclerosis in th heart or vessels. The prognosis depends on the ability of th patient to avoid the factors which bring on the attack. Thei repetition weakens the heart, while, if the intervals can b prolonged, there is no trouble for months and years. Brieger's patient kept in good health for thirty years by this means and Fischer's own patients were well after five or more years of the paroxysmal tachycardia. Treatment should attack the fundamental affection, and emotions, smoking and errors in diet should be avoided. Absolute repose, cold injections and compression of the vagus are good symptomatic measures. Edgrens has described a case in which the attacks were arrested by bending the neck over backward—this effect may have been due to compression of the vagus by this means. Others have derived benefit from massage of the abdomen, from holding the breath for twenty seconds, and from drinking cold water. Digitalis has seldom any influence. In distressing cases, morphin or amyl nitrite may be required. West has reported benefit from the latter in this "paroxysmal hurry of the heart."

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SOCIETIES.

Abbreviations:

Acad.—Academy.
Am.—American.
A.—Association.
Coll.—College.
Conf.—Conference.
Cong.—Congress.
Dist.—District.
Hosp.—Hospital.
Internat.—International.
M.—Medical, Medicine.
Nat.—National.
Phys.—Physicians.
S.—Society.
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